AN INVESTIGATION INTO THE CREATIVE BALANCE BETWEEN PRE-COMPOSITIONAL AND MUSICAL DECISIONS

KELLY LOUISE ASHMAN B.A.mus. (hons), DipLCM

A thesis submitted in partial fulfilment of the requirements of the University of Wolverhampton for the degree of Master of Philosophy

June 2009

Abstract

This thesis is an investigation into the creative balance between pre-compositional and musical decisions. The title represents my workings as a composer, and how the influence of others have effected my decisions to use their musical language and in the same way de-construct the workings of those significant techniques within the portfolio. The portfolio represents my development as a composer, from one with a good basic knowledge, to a composer who's absorption of others techniques has become a subconscious part of my own tonal style.

The first chapter reviews the general set up of the portfolio and the reasoning behind the structuring of the pieces within. There is also a focus on the influences throughout the compositions that have filtered into the works.

The following four chapters refer to each of the compositions individually in order of composition; *Elusive Landscapes*, *Percushett*, *Seven Songs* and *Dimensions*, providing in depth explanations for the decisions made throughout the compositional process. This is accompanied by an in depth analysis of the pre-compositional process and how each one is deconstructed.

The appendix contains the original presentation of the E.E.Cummings poems as used in *Seven Songs* as they appear on the page. These include *Nine Birds(rising*, *The little horse is newly Born)*, *Now, (more near ourselves than we*, *If everything happens that*

can't be done, *Voices to voices*, *One winter afternoon* and *FINIS…Over silent waters*, ordered in the appendix in the order they appear in the composition.

Contents

Acknowledgements

It is with great gratitude that I acknowledge my original director of studies Dr Darren Sproston for all his support and guidance. It is with his continued support even after the transfer to another institute that has allowed me to complete this submission.

Further Acknowledgement goes to Dr Amanda Bailey for her continuation of the course in Dr Sproston's absence.

Finally my thanks go to my family for their continual support upon my quest for completion.

Many thanks to you all

Introduction

Composition comprises two distinct features, that of the inspirational mind, revolving around previous encounters and teachings, and the further application of technique. The discovery of a compositional style was the aim of the portfolio, where a strong framework through the study of technique would provide the momentum for my own creative presence to emerge.

The portfolio presented is an investigation into the creative balance between pre-compositional and musical decisions, using the pre-compositional to explore technique while the creative element revolves around the decisions that break free of the pre-compositional mould, establishing the tonal outcome. The main technical feature used for the pre-compositional element is serialism, which later on in the portfolio evolves into the use of Kagel's pattern. This pre-compositional theme runs through each of the instrumental pieces of the portfolio.

Comprising of four pieces, the portfolio is structured so that each piece is presented in the order that they were composed. *Elusive Landscapes* originally composed as a string quartet opens the portfolio, although the experimentation with textures and timbral devices produced a much more powerful sound than expected. With the need for more depth, the double bass was added to the instrumentation, and finally the decision was made to make the piece one for string orchestra. Internal techniques within *Elusive Landscapes* include the use of *talae* as a rhythmic device, combined with the textural theme of static and active contrast, inspired by Ligeti's *String*

Quartet No.2. The second piece of the portfolio is very Varèsian, combining his percussive sound with the pre-compositional serialism used in an additive form. Combined with clarinet, the two areas of sound work together showing both percussive and tonal attempts on both sides of the instrumentation. It is also the opportunity to experiment with space, where the general set up can be spread further apart if desired by the performers for a different effect. The third entry to the portfolio is *Seven Songs*. Using the poems of E.E.Cummings, the texts relate to a portrait of life, the pre-compositional being the poems themselves. *Seven Songs* is the first and only piece of the portfolio to be free of strict pitch progression, where the use of word painting is the only pitch material linked to the text. Finally the fourth piece of the portfolio is *Dimensions*, returning back to the strictest form of pre-compositional structuring. The piece uses Kagel's pattern to produce pitch order, rhythm and texture for a time, as well as the duration and internal structuring of the piece. These techniques are set out in their strictest forms, recognisable to others, and then deconstructed by breaking the rules of the technique. This is done until no trace of the original impetus can be found. From this, the final element of the composition would be myself, working without any of the previous boundaries, applying my compositional style to develop further away from the original scheme.

Throughout the portfolio, the various teachings and techniques became more of a subconscious act, allowing the once inspirational to gain the methodical impetus it required to develop through the portfolio. When the question 'what is technique?' was put to Igor Stravinsky, he replied:

> The whole man. We learn how to use it but we cannot acquire it in the first place; or perhaps I should say that we are born with the ability to acquire it. At present it has come to mean the opposite of 'heart', though, of course, 'heart' is technique too.[1]

The pre-compositional element sets up a framework of guidelines and restrictions, it is the further decisions of development that moves the music away from the original structures, finally breaking down the scaffold to reveal my style of tonal preference.

In the early stages of the MPhil my first instinct was to explore some of the minimal techniques with which I was already familiar. Throughout my previous studies I became fascinated by Philip Glass's opera trilogy and his ability to captivate an audience with his array of minimalist techniques. He often reduced his textures of one solo voice in *Ahknaten* (1983), where the countertenor would carry the piece forward. At first I felt that I wanted to contribute to this genre, however, my first efforts to relay this minimal fascination into my own music did not inspire enough to develop these minimal techniques once they were applied. The outcomes of these techniques led to the abandonment of minimalism in the use of pitch and tonality, and moved into the background of the portfolio, being applied more to the ensemble groupings and background ostinato patterns. Hints at minimalist techniques can be found in the fourth song of the cycle *if everything happens that can't be done* (Example 1.3). This song is made up of many repetitive elements, often setting notated patterns alongside original and augmented sequences of rhythm, shifting the emphasis of the strong beat throughout the process, the addition of pitch variations often phasing in near the end of a sequence.

[1] Igor Stravinsky and Robert Craft. *Conversations with Igor Stravinsky* (Faber and Faber Ltd: 1979) p. 26.

One of the main discoveries about my compositional style was that deep down I wanted to write tonal music, but at the same time I did not want this to be obvious. In the early stages of the MPhil my first instinct was to explore some of the minimal techniques with which I was already familiar. Throughout my previous studies I became fascinated by Philip Glass's opera trilogy and his ability to captivate an audience with his array of minimalist techniques. Glass's music always seems to be purely melodic in function, but often it is more the repetitive aspect that he is most concerned with, which he so often combines with an additive process. Often Glass will reduced his textures of one voice, as he does with the solo voice in *Ahknaten* (1983), where the countertenor would carry the piece forward. At first I felt that I wanted to contribute to this genre, however, my first efforts to relay this minimal fascination into my own music did not inspire enough to develop these minimal techniques once they were applied. The outcomes of these techniques led to the abandonment of minimalism in the use of pitch and tonality, and moved into the background of the portfolio, being applied more to the ensemble groupings and background ostinato patterns. Hints at minimalist techniques can be found in the fourth song of the cycle *if everything happens that can't be done* (Example 1.2). This song is made up of many repetitive elements, often setting notated patterns alongside original and augmented sequences of rhythm, shifting the emphasis of the strong beat throughout the process, the addition of pitch variations often phasing in near the end of a sequence.

Example 1.2, (*if everything happens that can't be done*, bars 22 – 25)

By creating obstacles along the way, it made the writing of purely tonal music difficult. Venturing into areas of atonality moved me out of my comfort zone but it also provided realisation into the ability I had to manipulate the constructs of order to provide the tonality I wanted. Varese composed with tonal qualities, although many of his compositions revolved around the use of percussive sounds. Similarities are found through these percussive qualities, where atonal passages are treated in a percussive nature to move into the more tonal areas of music. The main idea became one to write music that had distinct tonal reference, but would require much development from its original source before it would present itself.

Further features of my style consists of a desire for a pre-designed order of work that then nurtures inspiration through the changing of that design. For me, I start by sketching ideas until I have a firm understanding of the compositional process for the piece. This is then used to set up a strict structure for the opening of the piece. Once the piece is fully established along its structure, new ideas and developments help to branch away from the original impetus, showcasing evolved versions of my original ideas. Strong interest in timbral and textural devices and the way they change the perception of the same idea is an essential part of my style. Through the opening sections of each piece of the portfolio, texture and timbral devices are used extensively to create the most tonal representation of the strict pitch and rhythmic structure previously set.

Finding a place to start with my portfolio was one of the more difficult aspects of the MPhil. I could not say that I had assessed my style of composition before starting this process; being a young composer I had not really composed enough to establish any specific style. The MPhil has allowed me to showcase some of the compositional abilities that I have acquired, evolving my compositional characteristics alongside those of others. As a result, my influences have been quite eclectic and not obviously all of them tonal. Ligeti's use of static and activity was something that I evolved alongside, first introduced at the beginning of the portfolio in *Elusive Landscapes* and further developed as the portfolio progressed. John Cage's, aleatory music also intrigued me that lead to its use in deciding a pitch order for *Percushett*. Mauricio Kagel's input with his use of geometric shapes to generate pitch material became the most involved device to use as a pre-compositional structure in *Dimensions*, extending the involvement with order and boundaries to its highest level for me so far.

From an interview with John Tusa for the BBC with Ligeti expressed: 'I am deeply linked to tradition. I think we don't discover from zero point new styles'.[2] Always continuing, whether we want to or not, Ligeti suggests that as much as we may think a new style has been created, elements of other music will always be present.

Techniques within the portfolio come from several aspects of study. Working as part of a female *a cappella* vocal quartet has introduced me to the immense quantity of harmonic differentiation possible. Pieces range from traditional choral works to soul jazz exploring some of the lowest female vocal ranges. Atmospheric word painting can be found in Schubert's setting of *The Lord is my Shepherd*. This lends dramatically to some of the word painting and harmonies found in the third work of the portfolio *Seven Songs*. Alongside this, Maxwell-Davis's *Snow Carol* is also a great influence for the music in *Seven Songs*. Maxwell-Davis embraces the dissonant vocal qualities that can be so hard to bring together as a performer, a quality that I have used myself to paint some of the more agitated texts from Cummings' poems. Ligeti's influence of space and timbre is a very significant part of the portfolio, amalgamated with the instrumental compositions. The strict pre-compositional methods needed the spacial and timbral qualities that Ligeti embraces so often, to allow the pitch material to be successful within the serial process. Serialism itself is probably one of the most frequent techniques used, influenced by Schoenberg's twelve tone row, and even more significantly, Kagel's pattern. At this point of the portfolio I was after a new level of pre-compositional workings to create tonality from. Using Kagel's pattern provided a more intricate maze of order, one that would provide the biggest challenge yet for me to derive tonality from and a ground for the firm establishment of my style. The serial input of the portfolio centres on the desire

[2] John Tusa. http://www.bbc.co.uk/radio3/johntusainterview/ligeti_transcript.shtml

for order. The serial techniques are in turn applied to create the structure and boundaries that further the inspiration to use these limitations, discovering alternative methods for development of the content within each composition.

Some of the background influences stem from Edgar Varèse and his experimentation with similar ensemble groupings and percussion. He often uses familiar repeated stabbings on one pitch that also appears in *Dimensions*. Varèse's *Ionisation* (1931) shows a similar presence on paper to *Percushett* offering similar devices for creating momentum, increasing speed through the addition of triplets and quintuplets, and following the dynamic swells alongside the longer sustained notation, used on many occasions in conjunction with tremolo. Varèse generally saw his overall picture for each composition as one large canvas that together told its story. The instrumental works in this portfolio follow a similar idea, where the emotive flow of the music is left uninterrupted by the amalgamation of each area of work into one whole movement.

The titles for the pieces within the portfolio coincide either with the way the piece was composed, through amalgamations of words that the piece represents or as a description of the piece as a whole. Varèse often implied that the titles for his compositions had no importance to him, only amusement as if a parental pastime. During his composition of *Hyperprism*, *Intergrales* and *Octandre*, he had been influenced by plant morphology studies, which he integrated into these compositions.

> Every motive – so it seems to me –contains, like a seed, its life-germ within itself. From the different plant-seeds grow different families of plants, dissimilar in form, foliage, blossom, fruit, growth and colour. Even each individual plant belonging to one and the same species assumes, in size, form and strength, a growth peculiar to itself. And so in each motive, there lies the embryo of its fully developed form; each

> one must unfold itself differently, yet each obediently follows the law of eternal harmony.[3]

All the titles within the portfolio relay an image of what the piece portrays either through the representation of the piece, like that of *Elusive Landscapes*, or through the way that the piece was composed. The most effective example of this is found in *Dimensions* where the piece revolves entirely at the start around the measurements and shape rotations, allowing the title to relay this to an audience.

The essence of my own musical training on the electronic organ has also subjected me to different harmonic experiences, using the many extensions of one tonal area that can be spread across many different instrumental families at an expanse of seven octaves. The organ further developed this recognition of space with the ability to place timbral groupings around the organ using different speakers to assign the sounds. These organ arrangements of *Chanson De Nuit* (1897) and *Chanson De Matin* (1989) by Edward Elgar, opera works such as *Your Tiny Hand is Frozen* from the opera *La Boheme* (1896) and *Vissi D'Arte* from *Tosca* (1900), both by Giacomo Puccini and theatre organ pieces such as *The Haunted Ballroom* (1934) by Geoffrey Toye, arranged for electronic organ by William Davies to create the big theatre organ presence.

The importance of group singing for a composer writing a vocal work is an invaluable experience. For myself, performing as part of an *a cappella* quartet, allowed me to gain a finer understanding of the ensemble structure and the inner workings, as well as the requirements of the performers. My aim with the texts chosen was to use the syntax of the words to depict the rhythmic drive, while the meaning of the poems would be conveyed by the harmonies.

[3] Malcolm Macdonald. *Varese: Astronomer in Sound* (Kahn & Averill, 2006) p. 73

The poems used were very descriptive in their surroundings, often painting beauty throughout the process of living whether living or dying. The harmonies within *Seven Songs* paint this representation of life and death and depict the high and low points of each reference. Often relating these processes of life to nature, the harmonies reflect the beauty as seen in the onlookers' eyes.

When the poems refer more to the human perception, the text gets more political and descriptive with feeling, often providing phrases of anger or and analytical view, trying to understand, why something has come to be. It is at these points that the rhythmic language becomes more animated, where the words used in the text provide the syntax for this rhythmic accompaniment.

Each piece follows a set of pre-compositional ideas, the main aim being to find a set of rules to which each piece would adhere. These rules are then used like chains, defining a procedure within which the melodic and harmonic material is developed. It is the interpretation of the rules that I find exciting, allowing myself to create within the boundaries that are set, leading to the intuitive compositional process that then takes over as Stravinsky recognised:

> My freedom will be so much the greater and more meaningful the more narrowly I limit my field of action and the more I surround myself with obstacles. Whatever diminishes constraint diminishes strength. The more constraint one imposes, the more one frees one's self of the chains that shackle the spirit.[4]

Much of the music throughout the portfolio is derived from the parameters set. Often these parameters consist of inner mechanisms that produce pitch material, which are then bound by serial structures. An example of this is seen from the use of the cycle

[4] Igor Stravinsky, *poetics of music*

of fifths in *Elusive Landscapes*. The fifths supply obvious space for a more tonal concept, which are then applied to a grid for a pitch order to be developed. Many different grids and pitch selection processes were experimented with before an order was decided upon. It is the choices made at this stage that sets up the tonal representation for the piece, creating the first perception of tonal space for the piece.

Embarking on the MPhil for me was about my development as a composer, strengthening my creative mind by broadening my technical knowledge. As an undergraduate through to the present day, each piece of music composed and adhered has provided a new and important learning experience. The recognition and use of techniques and structures during this time evolved into my ability to self-justify my own music, assessing what works and what does not, then further creating methods of resolving any issues that arise.

The portfolio comprises a set of four compositions based on specific ideas that I have found interesting to pursue. The order of these pieces throughout the portfolio follows the order of compositional development throughout the MPhil, totalling four compositions that as a whole equal one hour and five minutes (example 1.3).

Example 1.3 (Summary of pre-compositional concepts)

Elusive Landscapes	Tight framework determining much of the pitch order, very much a product of the process.
Percushett	Serial system of pitches, used loosely to guide pitch progression. Rhythmic progression intuitively concluded.
Song Cycle	Pre-compositional aspect provided by the poems text, Suggesting word painting, rhythmic impetus and tonal usage.
Dimensions	Return to strict framework created from the use of Kagel's pattern. This evolves over thirty-two minutes in length from strict pre-compositional, into fully composer controlled.

The first concept for this portfolio was technical, involving devices that can generate pitch and structural material. The pitch-generating devices depict some of the harmonic progressions that occur taken throughout the compositions. None are to be classed specifically as tonal, more dodecatonic, where hints at a tonal direction are present merely through using tonal centres. From here the pitch collection derived is composed vertically, allowing the order of pitches to instigate the realisation of some interesting and distinct sounds that coincide with the choice of orchestration. *Elusive Landscapes* and *Dimensions* begin in the realms of integral serialism. Creating structures using serialism in its strictest form was like containing all my options only to have to find a way to break free, moving out of integral serialism and into the plot for its creative escape. The structure, is strictly set to establish the process, but is soon deconstructed as a way of transforming the original compositional procedure entirely. This process of deconstruction generates a sense of freedom, as the usual bonds for the structure are broken.

Serial structures form the basis of the first piece of the portfolio, *Elusive Landscapes*; the complete twelve-note row featuring throughout the exposition, while the rest of the piece breaks down the essential serial elements. The serial process throughout the exposition section is used to depict rhythmic and phrase length, as well as melodic movement and overall structure. Once the development is reached, the serial hold on the music is taken apart, using episodic moments of a *fugato* to instigate the first stages of deconstruction. As the recapitulation is reached, the transformation of the original serial structure allows the music to sound free of the serial progression, until there is no serial hold over the music at all.

The next pieces in the portfolio move away from serial form although pitch systems are still followed. For example, *Percushett* follows a set of pitches, which commence with a small selection from the pitch scheme that is extended as the composition develops.

Mauricio Kagel's article for *Die Reihe* in 1960 entitled *Translation-Rotation* where he introduced the compositional formula based on the use of geometric pattern. When I first came across this pitch-generating device, I was taken with how complicated it seemed, and as much as I wanted to try and use this procedure, I did not know where to start. This was during the early stage of the portfolio, but as my confidence grew with the works I was producing, I felt that it would be a technique I needed to put to the test. This pattern was rotated at a fixed point of axis creating possibilities for sound patterns. As well as depicting sound structures, these shapes would also derive pitch duration from the visual concept of the rotated shape's side length between points of the geometric pattern. The shapes can also be stretched as well as rotated, flipped or mirrored. In essence the shape can be metamorphosed through any manner

as long as the original pattern can still be recognised. Once I had decided to adopt this method of composition, inspiration was in abundance offering a challenging and exciting proposition. The use of Kagel's pattern was a good link into the portfolio, using the ideas of another serialist and following similar pre-determined pitch generating methods used in the first piece of the portfolio.

The pitch-generating process depended on grid and shape sizes, degrees of rotation, and rhythmic progression while the shape also depicts structure and texture. The final shape needed to provide me with enough variation to inspire the later development of the product, and with a final order of seventy-two pitches (many repeated) there were plenty of ideas available.

Percushett also follows a pre-determined pitch progression but unlike *Elusive Landscapes*, *Percushett* does not keep referring to the tone row for strict order. The pitches are added to the piece, starting with the first four pitches, then as the piece progresses, more notes are added to the pitch availability and composed with from there intuitively within the scheme of the piece.

Seven Songs is the only piece of the portfolio not to use any form of pre-determined pitch, only suggestive direction. The piece uses the poems of E.E.Cummings as the pre-compositional structure, chosen for the beauty and uncertainty that many of his poems relay to the reader. The text provides the basis for the structure, evolving into the process of living, text layout and alternative punctuation providing the inspiration to interpret each poem into the scheme. Cummings's texts provide many opportunities for effective word painting and rhythmic impetus with the syllabic use of text. Avoiding the more extreme interpretations of the text, like that of Berio's

Circles, Cummings's poems are set in *Seven Songs* so that the meanings and beauty within his texts can be painted. Cummings's poems have always drawn me into the plot, needing to discover the meaning of the text. Often disrupted with punctuation and capitalization, the reader needs to read again and again until an understanding is reached. The time taken to decipher the poem is what leads to a greater understanding and inspiration for composition.

> The over-all intent, then, is not primarily visual at all, but rather figurative and aesthetic: Cummings is regulating, with a view to increased precision and vividness of effect, the manner in which the reader reads. The object is, for example, to loosen up the effect of a metrical line, to suggest the thing or idea spoken of, to alter and reinforce meanings, or to amplify and retard. His is a style of constant emphasis: since he relishes each phrase, word, and letter of a poem, he wants the reader to relish them too, and many of his devices are aimed simply at slowing down the reader's intake of the poem.[5]

Seven Songs does not often follow the common strophic forms that can so commonly be applied; instead verse repetition is often avoided allowing the words to define form throughout the work. The main recognised element of strophic writing is used for the central song of the work, applied as a complement to the strong rhythmic reference that the text supplied. The use of melodic and harmonic material within *Seven Songs* reflects my interpretation of Cummings's descriptive texts. During *Seven Songs* the text always outlines the structure of the music, only deviating through the repetition of some text and the layering of vocal parts.

Elusive Landscapes, *Percushett* and *Dimensions* all start with a pre-determined pitch concept, whether derived from shape patterns, serial structure or random selection. *Seven Songs* can only be classed as pre-determined in pitch through the pattern that

[5] Norman Friedman. *e. e. cummings: the art of his poetry*. (Baltimore: Johns Hopkins Press, 1960) p. 123 - 124.

the pitches would paint relating to the structure of the text, and my interpretation of where the music would be pitched if Cummings had written songs instead of poems.

Throughout the portfolio I have worked rigorously alongside the concept or order, in some cases being more obviously serial than others. I have realised that through the use of atonal music generating devices, I have managed to create some very tonal, often harmonic works. Once my sense of direction had been confirmed for the portfolio, I had no idea how tonal the outcome would be. While each piece was given order through pitch content, it was my tonal desire that created the final outcome. *Elusive Landscapes* was heavily structured through of the order of pitches, while it was my work in generating the row that leant to the tonal outcome. Similarly, *Percushett* was very tonal in the beginning, although the tone order was generated using alletoric techniques, only acquiring the more atonal qualities nearer the end of the piece. *Seven Songs* became the only piece within the portfolio not to use any serial process to control pitch usage, becoming the freest in harmonic expression. The portfolio ends using Kagel's pattern, opening with the integral serialist approach and the order of pitches as the rotations provided, moving into the order of pitches within a rotation, but not in order that they were produced, to finally moving away from the serial concept as the piece develops.

The challenge of creating something that your limitations suggested you could not create brings immense satisfaction, and an abundance of inspiration. To progress with this development, I will be looking into the creation of my own limitations, rather than in the limitations of others as well as the use of some more alternative ensembles advancing further the usage of timbral effects as well as some more vocal embellishments.

The journey through this portfolio has lead to many developments for me as a composer. In the beginning I entered into the Mphil with very little compositional knowledge. I had the basic knowledge of structures and texture, timbre and rhythm, as well as an inner understanding of what works harmonically and melodically. From here the portfolio became a mission to discover who I could be as a composer. By creating limitations and boundaries, I allowed myself to compose on a higher plane, through the extension of my technical knowledge. Each opportunity to move away from the original limitations bought new life to each piece in the portfolio and self-belief in my abilities as a composer. The harmonic and melodic qualities were the desired outcomes of each piece, whether prominent in the beginning or a battling force for recognition, the aim for each piece was to enter into a tonal area of gratification. This being so, the move out of the intense claustrophobic use of the pre-compositional structures was still the most important element for the instrumental pieces, with a conscious desire for the piece to become more tonal in the process. The portfolio comes together to portray my journey so far as a composer and my technical development. *Elusive Landscapes* as the first piece written, sets off in the strictest setting, where the serial form is used to structure all areas within the piece, where only at the very end of the piece, does the music break completely free of the structure. *Percushett* that follows, became more loosely bound, using a serial progression that related to the addition of pitches and acceleration accentuated rhythms. With these fewer boundaries, the piece was allowed to develop very quickly into new areas of material. *Seven Songs* had the least constraint on tonality, where the pre-compositional aspect was the poems. This provided plenty of freedom for harmonic writing and relief from the atonal bindings. Finally, *Dimensions* returns back to the strictest confinements using Kagel's pattern, where geometric shapes control not only the pitch, but also the use of textures, syncopation and rhythmic

length. With this piece being thirty-two minutes in length, the piece is given plenty of time and opportunities to venture out of this stronghold until the piece is completely free of the original pre-compositional concept. From the fourth section of the piece, to the end of the piece, the music develops without the constraints of the beginning enabling new ideas to come to life.

Elusive Landscapes

Elusive Landscapes has two principal textural characteristics, which are the thematic basis of the composition: the first is a static texture and the other active. These materials can be perceived to be in constant battle with each other to be heard. Once complete, the sound that the static material alluded to becomes an absence of consciousness, an imaginary place, while the active sections pull the mind back to reality. This elusive place that is provided by the static periods, leads to the conclusion that the active material portrays "real life", signifying conscious, everyday emotions. During the piece, any battle between the two themes is perceived as the phasing of the mind from reality to the subconscious. The active and static characteristics are realised through several musical devices. Static material is often indicated by a slow tempo with augmented rhythms, and steady harmonic movement that is easily distinguished, while the active passages are created through increased tempo settings, shorter rhythmic elements and convoluted areas of polyphony.

Timbre is also used to emphasise changes between static and active areas with the use of techniques such as pizzicato to accentuate the polyphony. Specific up and down bows are also used to emphasise certain passages, the main figure being the triplet minim motif that constantly emerges through the piece. In conjunction with the specific bow markings, this provides the most prominent and consistent theme throughout the work. Tremolo strings is another device found within the piece, making appearances within the music where static and active subjects are combined. On these occasions the sustained note defines a static quality while the tremolo provides rhythmic activity. These characteristics are constantly changing throughout

the composition and are either used alternately or juxtaposed with each other in order to create the two 'subjects' of a sonata structure, albeit modified.

Sonata form's only relation to providing structure was through the basic boundaries of compositional routine, exposition to state subject material, development, recapitulation and coda (example 2.1). Sonata form does not apply to the harmonic progressions, which is another reason why the form is classed as modified. During the exposition the first subject alternates between active and static material, subsequently moving through the transition into a combination of static and active material for the second subject.

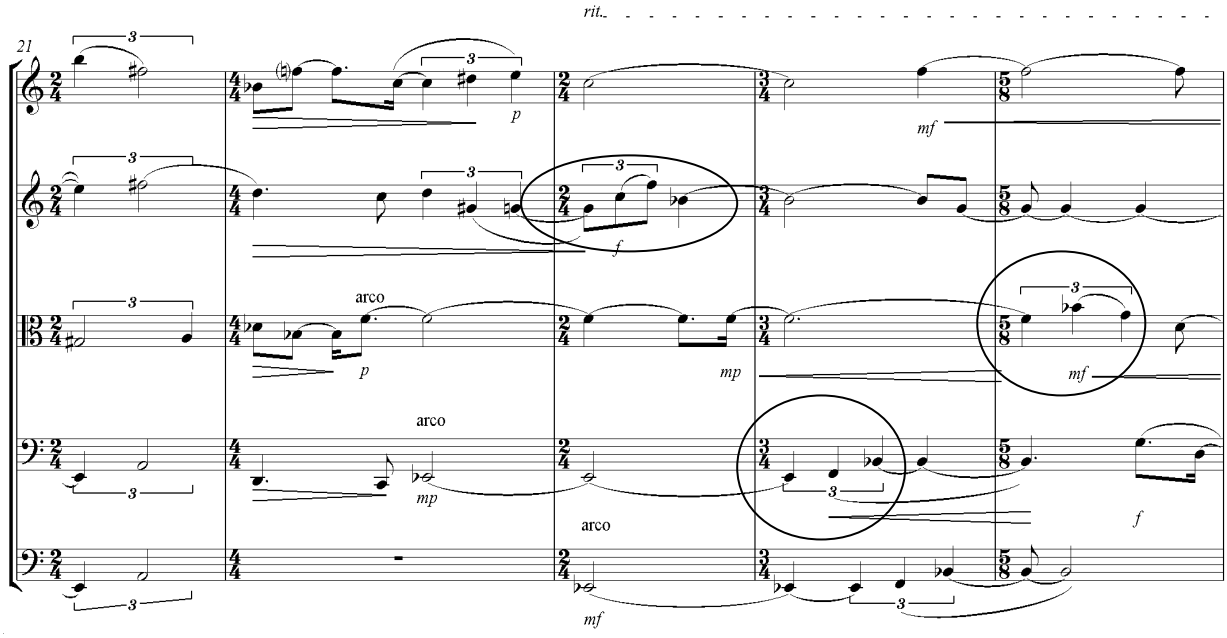
Example 2.1 (table of structure)

Movement	**Bars…**
Exposition	Bars 1 – 51
Development	Bars 52 – 120
Recapitulation	Bars 120 – 188
Coda	Bars 189 – 202

The development section is structured using a *fugato*, taking the active material from the first four bars of the second subject, bars 33 to 36, to create the subject material of the development while the counter subject is taken from the exposition's transition (example 2.2), constructed from the most active fragments within this passage (example 2.3). The subject and counter subject of the *fugato* provide the active aspect, while the static quality is represented through silence that the removal of fragments creates alongside the homophonic episodes. The recapitulation is a

retrograde of the exposition, which is manipulated so that the active material becomes static, and vice versa.

Example 2.2 (bars 21 – 25)



Example 2.3 (counter subject for fugato before deconstruction)

Ligeti's *String Quartet No 2* (1968) uses static and active textural surfaces as the main substance for his piece. These provide the main inspiration for the compositional route ventured within *Elusive Landscapes*. The opening movement of Ligeti's second string quartet *Allegro Nervosa* revolves around alternations of calm, static textures

with harmonics slowly layered through the quartet, followed by short bursts of frantic movement. Textural contrasts also predominate through the other four movements.

Ligeti is constantly aware of previous traditions and processes in music and how they have influenced his own works stating…

> There was the desire always to do something new, not repeating the past, yet there was at the same time the increasing desire to make allusions to the past, and even to pay some discreet homage's…. perhaps I somewhere harbour the need, when I cut myself off from tradition so radically, to secretly maintain an umbilical cord, like an astronaught who is bound by a cord to a satellite, although he moves freely in space.[6]

Elusive Landscapes also seeks to be different through traditional features by using the medieval technique of *talae* as a structural process. Using *talae* alongside the more common structures of sonata form and fugue and then manipulating them with numerical forces taken from the serial tone row, develops these traditional features through many combinations.

The overarching form (or 'Landscape' to which the title refers) encompasses two microcosmic structures - serialism and temporal durations, which are subsequently deconstructed from the development stage through to the end of the piece. This process of deconstruction then takes over, evolving from the serial line. The 'Elusiveness' refers to the gradual and continual transformation into something new.

Serialism governs the inner proportions of the subject material and the melodic and harmonic route, providing the first microcosmic method for structuring the material within the exposition. Deconstruction of the serial process takes place during the

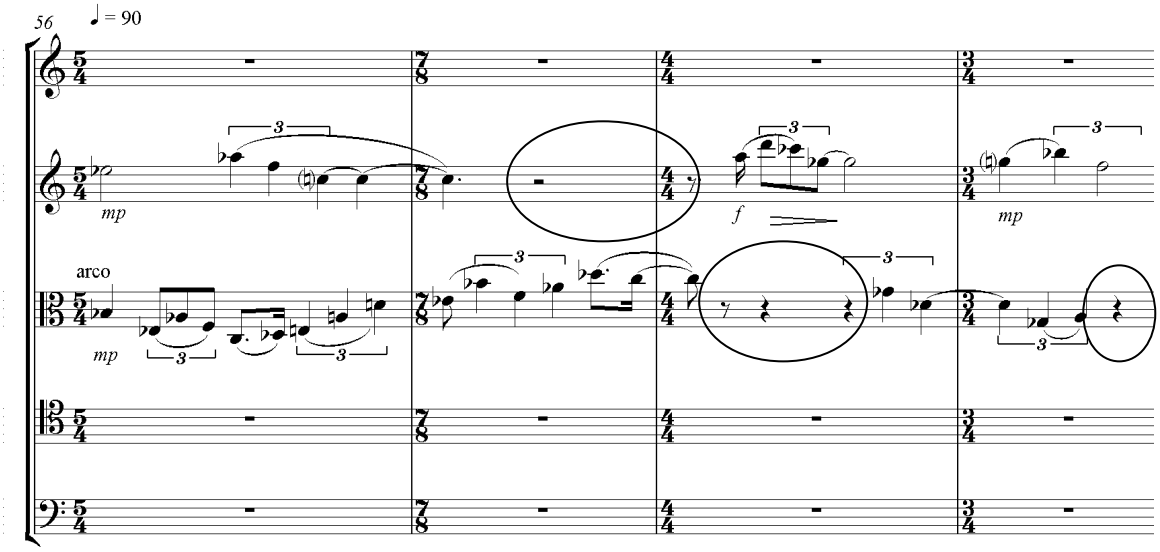
[6] Richard Toop: *Gyorgy Ligeti* (Phaidon Press Limited, 1999), p. 131.

development, where the first compositional stages of the development generated a very convoluted sound. The random removal of fragments breaks the flow of the *fugato*, and makes use of the static characteristic, interrupting the order of pitches within the row. This develops the serial tradition, leading into a recapitulation where pitch order has evolved to have no links with the original tone row.

The second microcosmic method is the numerical sequences that govern the proportions of the piece. These sequences hold firmly throughout the exposition. However, as the development breaks down the structures, the numerical element of proportions is also abandoned, textural layering taking over the proportions of static and active sections. The *talae* is another element that is broken down through the development process, using rhythmic progressions as they relate to the motifs and structures, rather than the specific order of the *talae* during the exposition.

Using the exposition to establish the tone row the development then breaks down the rules, while the recapitulation reveals the final outcome of this method. In the exposition serial technique is applied using the first and second subjects to focus on different uses for the tone row. The first takes one row and shares this between the parts while the second subject focuses the activity of the row in a linear fashion with a row per part. Once the subject material is established, the rigidity of the serial technique is completely broken down and restructured internally with the use of a *fugato* employing the episodes to emphasize the move away from the structured tone row alongside the fragment removal idea which breaks the progression of the tone row even further (example 2.4).

Example 2.4 (bars 56 – 59)

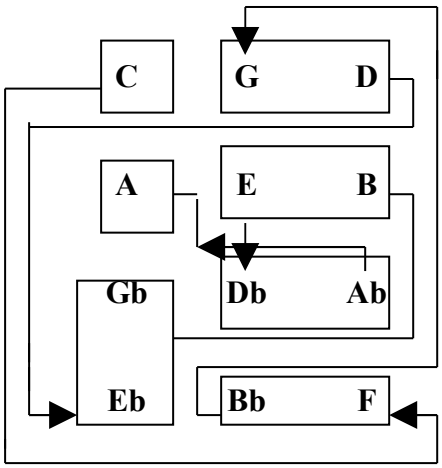


The recapitulation is a retrograde of the exposition, where the static and active proportions are reorganised so that what was previously static now represents active material and the active becomes static. The order of proportions for the recapitulation follows the original structure as used in the exposition. Following the original template, the proportions are used to determine which sections are the longer or shorter only, allowing the material to be augmented and diminished accordingly to represent the required theme.

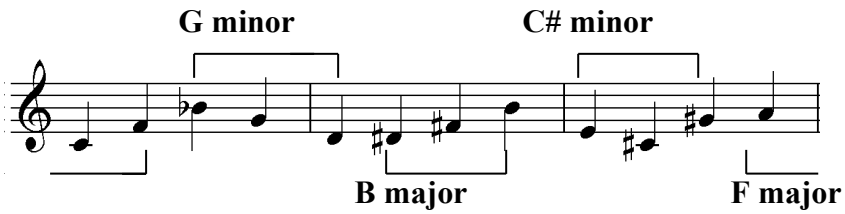
To determine the note order, the circle of fifths was placed into a grid, three by four, reading from the top, left to right (example 2.5). From the grid the notes were chosen, one from the top left of the grid to start the process, then two from the bottom right, and two at a time alternating from there. The final tone row uses all twelve tones starting on C and ending with A (example 2.5).

The use of the circle of fifths implied a potential to provide tonal centres and once the tone row was produced, several harmonic references presented themselves (example 2.6).

Example 2.5



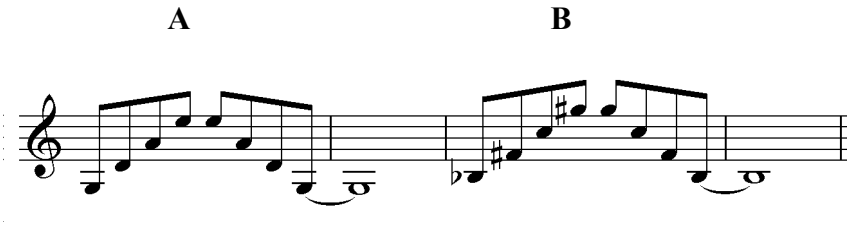
Example 2.6 (tone row)



Berg uses serial technique in his violin concerto where similar ideas of creating harmonic implications through a twelve-note row can be found. He achieves this by creating a row that principally consists of major and minor thirds (example 2.7). Berg then used this row to create permutations of the series by omitting alternate notes leaving a sequence of perfect fifths and augmented/diminished fifths (example 2.8).

Example 2.7 (tone row for Berg's Violin Concerto)

Example 2.8 (variations evolved from Berg's tone row)



Similarities between Berg's Violin Concerto and *Elusive Landscapes* are found through the removal of notes within in the system, as a way of modifying the original serial progression. *Elusive Landscapes* employs the omission process as a developmental technique, which removes fragments more frequently as the movement continues.

The tone row provides the generative source for the processes that occur within the work. Established in its full linear form between bars 33 – 36 during the exposition the tone row is used to organise the rhythmic elements for the *talae*, the active and

static structure and the melodic lines throughout the work, creating a tight framework to deconstruct through the development and recapitulation stages.

The rhythmic structure was derived from the numerical values assigned to each individual note of the tone row. Using a selection of six rhythmic cells, chosen for the abundance of possibilities for rhythmic variation, the units of rhythm were aligned with the numbers one to six and seven to twelve running from right to left on each line (example 2.9). The rhythmic units were then structured following the order of pitch classes of the tone row:

Example 2.9 (rhythmic selection)

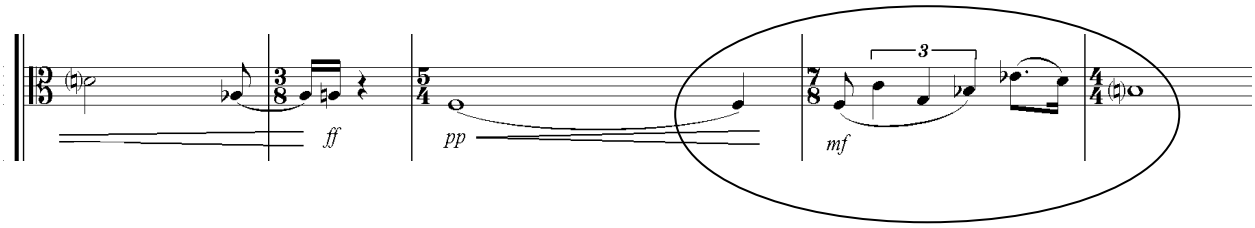
1 2 3 4 5 6
7 8 9 10 11 12

Numbering the pitches of the tone row (C sharp = 1, D = 2…. C natural = 12) and relating this order to the rhythmic elements resulted in a rhythmic progression that produced an identical repeat of itself. This set of rhythmic units was then made into a *talae* comprising just six rhythmic units that would be used following the same serial progression as the tone row (example 2.10). The original form of the *talae* appears at the start of the second subject in bar 33 (example 2.11).

Example 2.10 (rhythmic units before *talae* constructed)

12 5 10 7 2 3
6 11 4 1 8 9

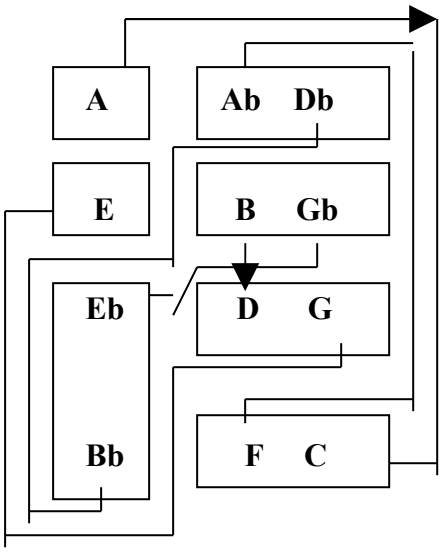
Example 2.11, (bars 31 – 34)



The first and second subjects combine both static and active material in different ways creating areas of contrast. The proportions of the static and active themes are organized using the pitch classes of the row, constantly moving between prominent areas of static and active material, the active theme being introduced as the first subject progresses in bar 3. Static opens as the strongest theme, the active passages appearing more frequently as the exposition continues, and for longer periods of time. The tempo then increases until the active part of the subject becomes the most prominent by the end of the first subject.

To allow a steady change in emphasis from the static theme to that of active throughout the first subject, the tone row was retrograded and then placed into the same three by four grid as the circle of fifths were that generated the original row (example 2.12).

Example 2.12



Once the sequence was generated, the opening value of A meant that the first half of the sequence was made up of higher numerical values than the second half which lacked the presence of low and mid range units. This meant that no significant difference could be interpreted between active and static passages to portray the idea of one feature taking over from the other. To allow this to happen, the A value was simply placed at the end of the sequence providing a high numerical value at the end of the section (example 2.13).

Example 2.13 (table of static and active order)

Pitch	C	F	Ab	Db	Bb	Eb	Gb	B	D	G	E	A
Pitch Class	12	5	8	1	10	3	6	11	2	7	4	9
Static/Active	S	A	S	A	S	A	S	A	S	A	S	A

The desired outcome for the first subject was to present the static material as a dominant force, then as the music progressed, the active material would start to take over, becoming the source of dominance at the end of the subject. It is not until the exposition is heard in its entirety that a realisation for this function is established.

The new order of pitch classes is used to determine the duration of beats for each static and active section. Each pitch class represents the number in duration of crotchet beats. The opening static section comes from the pitch class of twelve, indicating that the static section would last for the duration of twelve crotchet beats (example 2.14). The first subject follows this process until the end of bar 22 where the transition is reached, using the *talae* in its augmented form during static moments.

Example 2.14 (bars 1 – 3)

Throughout the first subject, the pitch material from the tone row is transposed up a major third (example 2.15), and placed vertically throughout the parts so that only one version of the row is present at any one time. During the first subject, the tone row in its transposed form creates additional tonal centres. The tone row itself is in the key of B major although once organised for the opening throughout the instrumentation, A minor becomes the first harmonic reference. Other tonal centres that are provided by the transposed tone row are B minor, D sharp major and E minor, which are hinted at through the horizontal presence of the row. None of the harmonic areas were decided upon before the tone row was created, but became the product of the serial process.

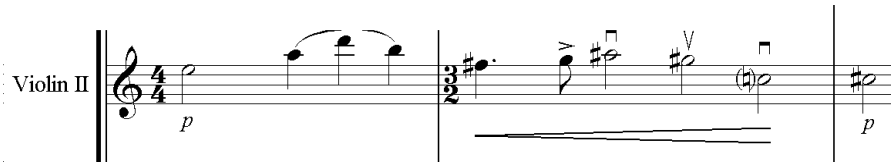
Example 2.15 (transposed tone row)

The second subject uses the active and static ideas in a different way from the first subject. While the first subject is divided so that the active and static passages are kept separate, the second subject superimposes the two, both themes running alongside each other, one represented as a line of active melody, while the static theme is present as a chordal structure through the other instrumental sections. The static theme is again the more dominant force at the beginning of the second subject (example 2.16), but this dominance soon moves into the active theme, becoming more fluid throughout the second subject, increasing through the instrumentation until a *tutti* is achieved

Example 2.16 (bars 36 – 39)

The active passages in the second subject differ from the first subject due to the linear use of the tone row creating a more lyrical melodic line (example 2.17).

Example 2.17 (bars 1 – 3)



Once the original row has been played during the second subject, it is then subjected to retrograde, inversion, retrograde inversion and transposition, as well as retaining its original form (example 2.18). The first violins take the retrograde of the original tone row, as well as its transposition a perfect fifth higher (example 2.19).

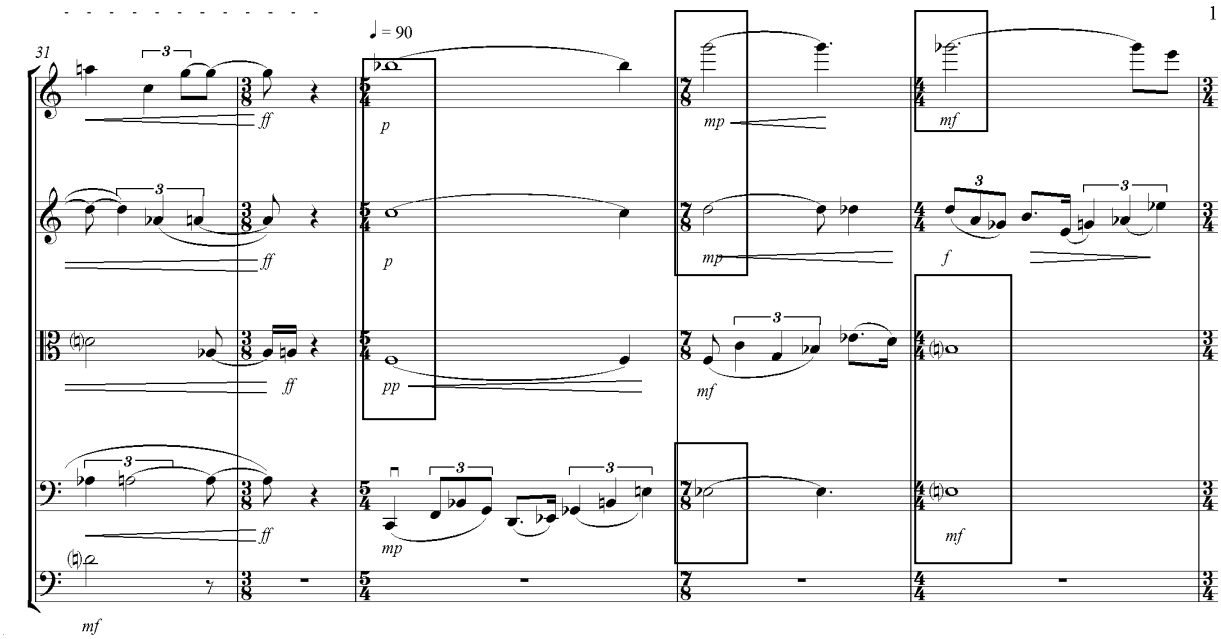
Example 2.18 (tone row and its inversions)

Example 2.19 (distributions of rows and the transpositions used)

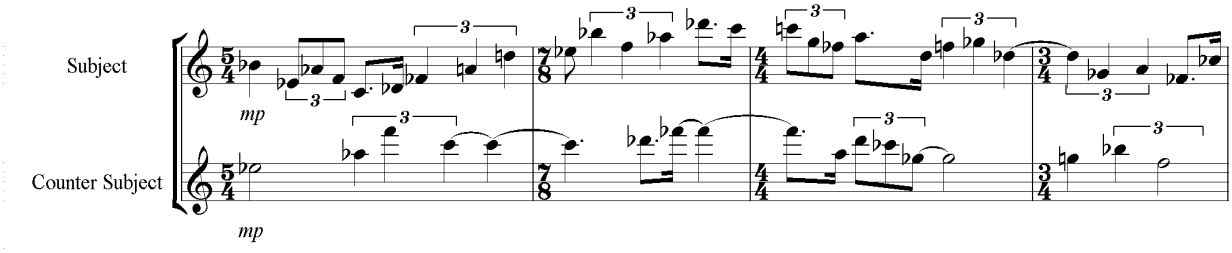
Instrumental section	Version of row	Transposition
First violins	Retrograde of original row	Perfect fifth higher
Second violins	Retrograde of inverted row	Major second lower
Violas	Inversion of original row	Perfect fourth higher
Cellos	Original row	Perfect fifth higher
Double basses	Mix of all above	Mix of all above

The activity passages during the second subject use different formations of the tone row as melodic lines, while the static accompaniment uses adjacent notes from the tone row to provide chordal harmonies. The second subject starts in bar 33 where the three higher string sections play the C, F and B flat from the opening of the original row, creating the first representation of the static material for the second subject. The preceding three bars use the remainder of the notes from the row (example 2.20).

Example 2.20 (bars 31 –35)



Example 2.21 (working progress bars 52-55)



During the development the *fugato* provides the basic structure with its contrapuntal texture (example 2.21) but as the development proceeds, fragments of the subjects are removed to avoid loss of clarity between themes as the texture thickened This also complied with the general deconstruction process, interrupting the usual function of the *fugue* (example 2.22). Rests at this point function as static elements within the subject and counter subject lines from both visual and aural perspectives.

Example 2.22

Due to the freer functioning of the episodes, a fuller texture was created within them to contrast with the broken lines of the subject and counter subject. These episodes provide moments where the melodic material is exploited to provide some of the most prominent harmonic material of the work. It is at these points where respite is created from the constant movement and convolution of the subject and counter subject. In these moments there is a contrast of dynamic, harmony and texture from that found in the *fugato* subject and counter subject.

The recapitulation is devoid of the serial compositional process, but still uses the majority of the material from the exposition. The first idea for the recapitulation was to provide a complete retrograde of the exposition creating symmetry. This would have interpreted the opening differently; however, it would have fundamentally been too similar.

To develop this retrograde idea, the static passages from the exposition were transformed into active passages, sustained notes being broken up by short stabs of sound and using the diminution of the rhythm from these passages, and vice versa, active material was rhythmically augmented, reduced in tempo and sustained to create static.

The formation of the recapitulation uses the original structure from the exposition's first subject, alternating between static and active passages, one taking over from the other. However, the durations were developed so that the basic structure of proportions could be maintained for the duration of the section. The activity represents the strongest theme at the beginning of the movement; this would inevitably end with static material dominating once the coda was reached. The number scheme that was generated from the tone row was used to determine where and when the change in force between the two themes would occur (example 2.23). The table shows the beat total for each active and static section, relating to the original structure where the dominance of theme changes. The original sequence was only used as a guideline for the structure, the rest was decided upon during the redirection of the retrograded exposition.

Example 2.23 (structure of the recapitulation)

Bar No	Structure of passage	Total of beats	Tempo (crotchet beats per minute)	Original beat total of static/activity in first subject
120 – 126	Active	16 beats	132	Static - 12 beats
127	Static	4 beats	132	Activity – 5 beats
127 – 133	Active	18 beats	132	Static – 8 beats
134 – 137	Static	16 beats	132	Activity – 1 beat
138 – 142	Active	20 beats	114	Static - 10 beats
143 – 145	Static	12 beats	70 – 100	Activity – 3 beats
146 – 148	Active	8 beats	100	Static – 6 beats
149 – 154	Static	23 beats	80	Activity – 11 beats
154 – 157	Active	6.5 beats	80	Static – 2 beats
157 – 166	Static	41 beats	80	Activity – 7 beats
167 – 168	Active	3 beats	80	Static – 4 beats
169 – 179	Static	44 beats	70	Activity – 9 beats
180	Active	1.5 beats	70	N/A
181 – 196	Static	57 beats	70	N/A

Changing the static passages into active ones meant that a substantial number of sustained notes needed to be altered. In these instances, the sustained pitches were kept, but broken into sharp attacking figures often using strong down bows to generate momentum through the active characteristics of the recapitulation (example 2.24). These keep the momentum flowing while also creating a nervous uncertainty to the music, a fight for the active passages to keep control.

Example 2.24 (bars 136 – 140)

The coda starts at bar 189 and with absence of active material here, the coda indicates the battle won, and whatever the listener perceives the static material as, will realise that the static characteristic now dominates the piece.

The momentum of the piece is controlled by the active and static passages and in most instances the tempo markings reflect the characteristic that is being portrayed. The opening section states the tempo at sixty crotchet beats per minute, but in this instance, where the active passages remain small, the tempo is kept the same, and only the rhythmic cells imitate the move into activity with the use of the original *talae*. As the active units become more prominent, the tempo is increased to accentuate the change in focus. An example of this is found at bar 13 where the tempo is increased to seventy-four beats per minute and also joined by the smaller rhythmic cells of the original talea increasing movement around the tone row (example 2.25). Bar 15, at the end of this example, shows the change back to static, complete with a reduction back to the starting tempo.

Example 2.25 (bars 11 – 15)

The subject and counter subject are the main active driving forces accentuated by the tempo. The development section sees the momentum working in a similar way. The start of the development has a tempo setting of ninety crotchet beats per minute representing the active material. From this point the subject and counter subject become the active material, set at a faster tempo on successive entries. The episodes therefore represent the static areas through the piece, which is not so obvious at the start, but as the piece progresses, the static section decreases in tempo on each entry.

The following example shows the final episode at its slowest tempo, followed by the last statement of material from the subject and counter subject (example 2.26).

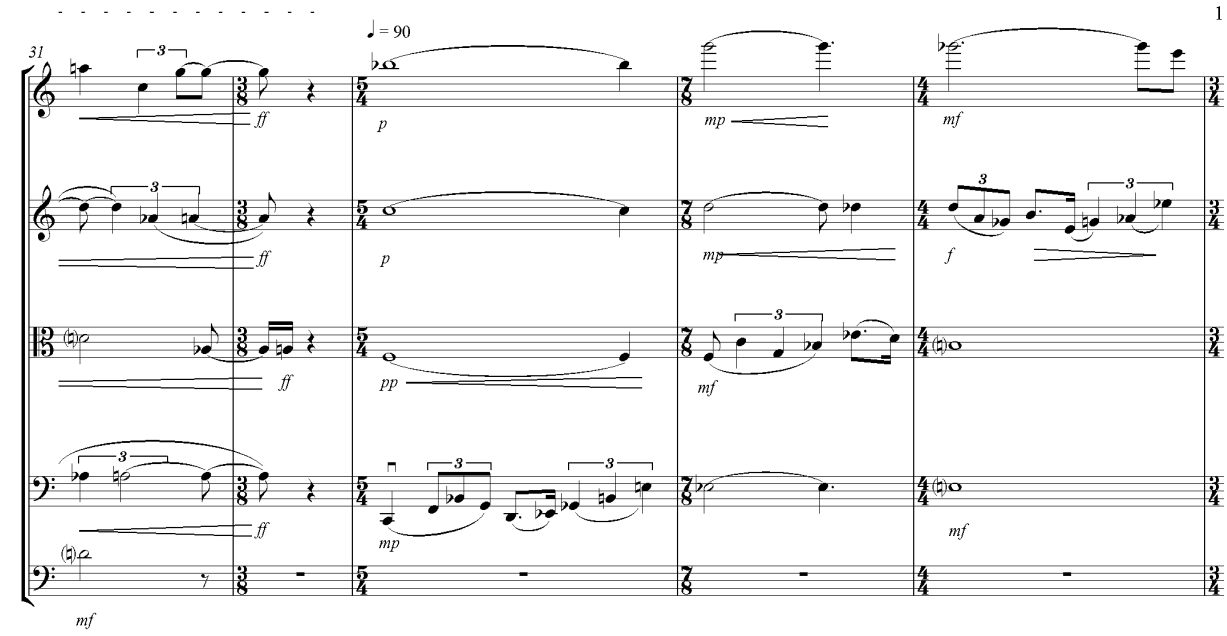
Example 2.26 (bars 111 – 120)

The momentum of the piece hits its peak at the beginning of the recapitulation, reducing slowly down throughout the movement towards the coda. Tempo settings are fast at the beginning of this movement, the active theme being the most prominent. The static characteristic then starts to enter the piece reducing the tempo as the theme becomes more prominent. The static does have moments during the start of the recapitulation where it enters at the same speed as the active material, using only the long note durations to relate to the static idea. The static then starts to take over, bring down the momentum and tempo of the piece, finally using the active material at the same tempo as the static emphasising a complete change of dominance.

Throughout the piece, the dynamics are set to allow the most prominent melodic lines to stand out, moving secondary material to the background of the piece (example 2.27). As the melodic line moves up in register, the dynamic increases while the supporting harmonic accompaniment stays in the background using a quieter dynamic.

Movement change often occurs with a dramatic alteration to the dynamic status. This is most prominent in bar 120 where the music enters the recapitulation (example 2.26). Other dynamic passages usually occur during static passages, where all material is of the same importance. An example of this can be seen in bars 91 to 95 with the use of unison dynamics (example 2.28)

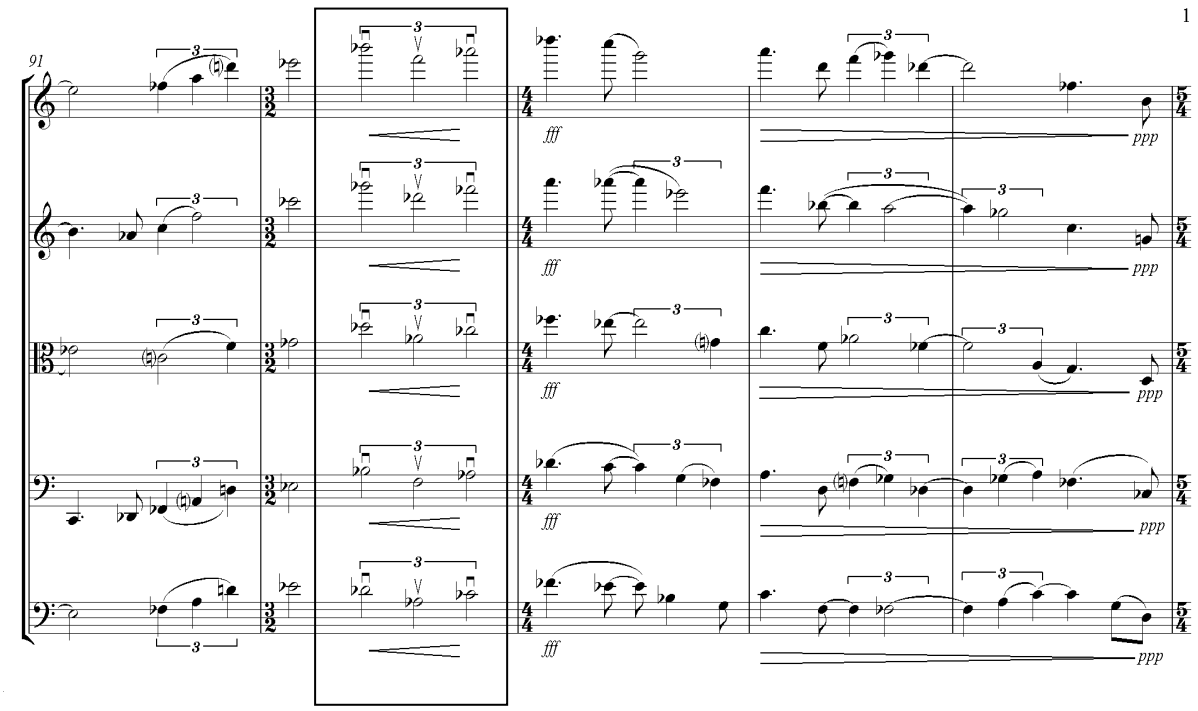
Example 2.27 (bars 31 – 35)



Articulation is often seen with specific bow markings on the score. The prominent minim triplet figure is always bowed the same way, wherever is appears through the

piece. This device is used to emphasise the thematicism at these specific points, allowing the strength of the feature to remain constant throughout the piece (example 2.28).

Example 2.28 (bars 91 – 95)

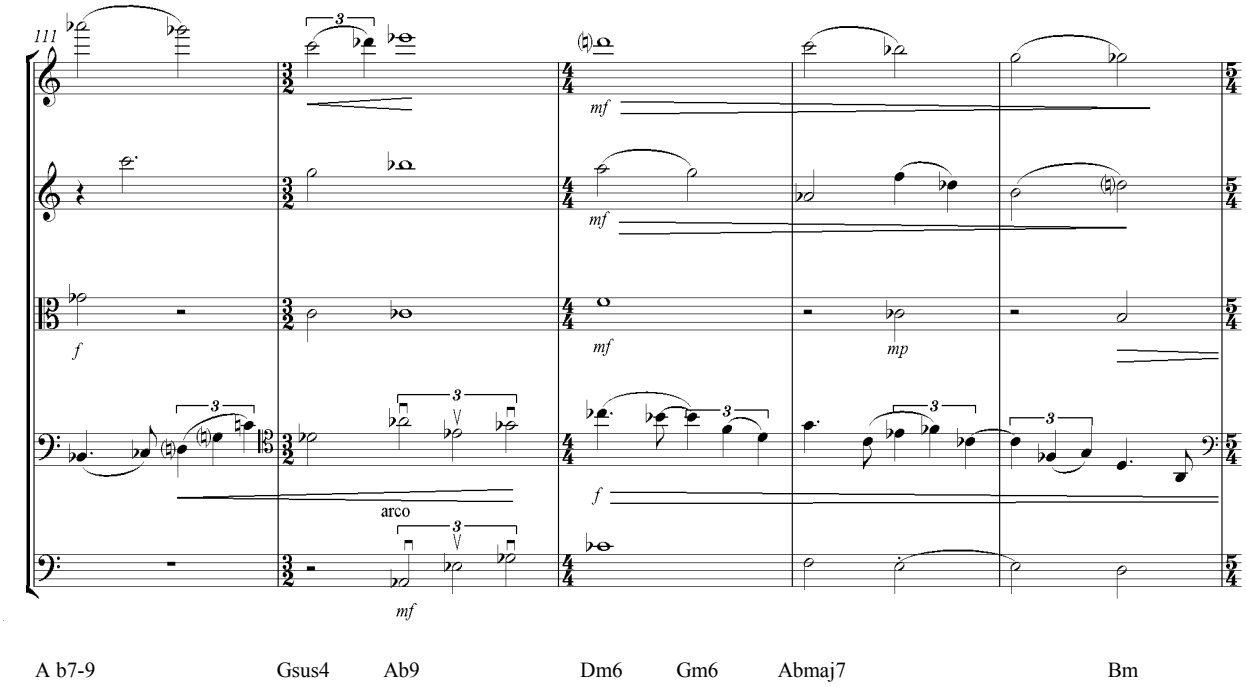


Throughout the composition, the use of serialism means that harmony is dodecatonic where it is used strictly in linear form, predominantly in the second subject. It is the static sections, which allow the harmonic prominence to take place, the most prominent found throughout the episodes of the development section. In the episodes the music is free of generative process, often duplicating material a third higher, or using canon, implementing harmonic movement.

As the episodes reduce in speed the pitches are sustained longer, allowing the harmonic passages to flourish. In bar 110, the final episode of the development is set

at a tempo of sixty-six crotchet beats per minute allowing note durations to linger and, combined with the freedom to allow harmonic material to develop during the episodes, this passage has a rich sound quality (example 2.29). No real harmonic area is strongly established, but many chord references are passed through. Areas where pitch relations are close are spread throughout the instrumentation, making use of the wide scope of register that was available throughout the instrumentation.

Example 2.29 (bars 111 – 115)



Once the music enters the recapitulation, the harmony is at its most limited. There are no real harmonic references, only clarity through intervals amongst the static sections. The movement into the coda is the most tonally perceived. The final five bars become the most tonally represented in the piece, using the long sustained pitches to enhance a full harmonic structure. It is here where the piece enters the tonal area of A again as it began, until it resides in E minor.

Elusive Landscapes is a measure of two forces with the music representing the forces in opposition with each other, constantly pulling the music from one direction to the other. In the coda, the final representation of the dominant force is presented as static. The static dominance is a representation of peace, whether it is a dream achieved, heaven reached, or our sanity lost, *Elusive Landscapes* is the place that someone wants to be, an ideal world, representing what eludes us, and our pursuit of an ideal.

Percushett

The title, *Percushett* comprises an amalgamation of the two instrumental groupings of the piece, percussion and clarinet, using the first two syllables of percussion 'percus' and the last syllable of clarinet, 'et'. Reflecting the title of the piece, the first section is the most percussive, while the more melodic elements filter in from the second section through to the end. Several linking elements are found throughout the clarinet and percussion parts, presented as pitch relations, dynamic usage and rhythmic patterns. These elements provide bonds between the two instrumental groups, connecting the distinct sounds of the solo clarinet and the percussion accompaniment by means of an interlinking percussive character.

A wide variety of instruments make up the percussion section comprising both tuned and un-tuned percussion. These instruments all have their own qualities, which relate to the melodic material and technical usage of the clarinet. For example, the high and low pitches of the bongos and agogos are used to imitate the movement of pitch from the clarinet line. Others imitate movement using performance techniques, for instance, the tambourine, which can be struck or shaken and the triangle, which can ring out or be muted. The table shows the non-tuned percussion instruments that are used within the piece and how they are divided between percussionists, some being duplicated amongst parts (table 3.1).

Table 3.1, (non-tuned percussion used)

	Percussionist 1	Percussionist 2	Percussionist 3	Percussionist 4
Tom-toms				
Floor tom				
Snare				
Timbales				
Bongos				
Congas				
Tambourine				
Agogo				
Hi-Hat				
Triangle				
Ride Cymbal				
Cow Bell				
Guiro				
Temple Block				
Claves				
Wood Blocks				
Maraca				

The high quantity of percussive instruments throughout this piece indicates that of a percussion ensemble. Alternatively, on closer inspection the solo nature of the piece can be perceived with the percussion providing an interlinking accompaniment. It is the constant linking of rhythmic structures and pitch patterns that give the percussion its strong status within the piece. The percussive accompaniment plays a vital role in the creation of character in the piece, providing strong links between the clarinet and percussion, where both instrumental areas cross over into the other's function. As suggested by Schoenberg:

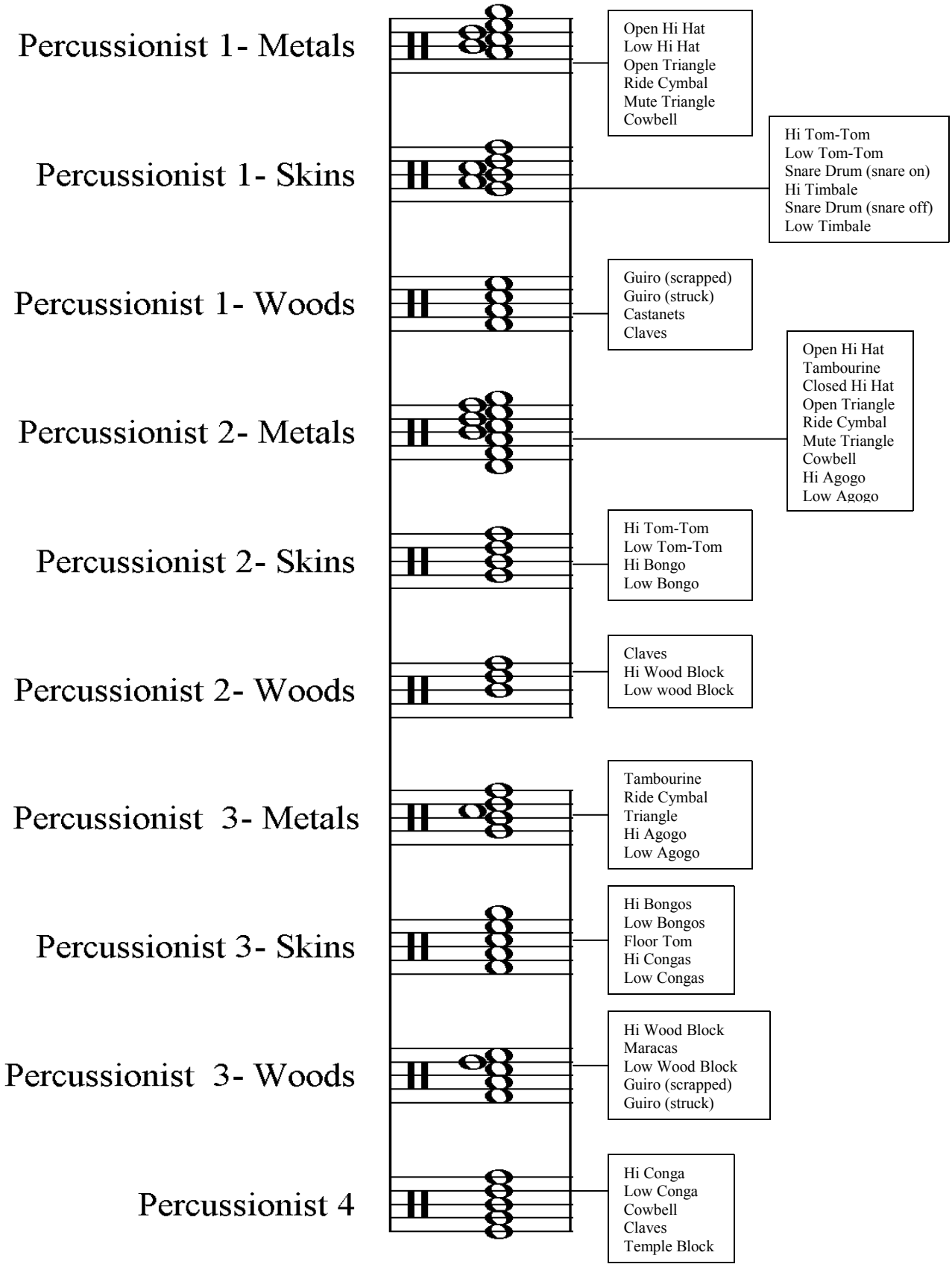
> The accompaniment should not be a mere addition. It should be as functional as possible, and at best should act as a complement to the

> essentials of its subject: the tonality, rhythm, phrasing, contour, character and mood. It should reveal the inherent harmony of the theme, and establishes a unifying motus. It should satisfy the necessities and exploit the resources of the instruments (or group of instruments)[7]

A key is provided for percussionists, relating their corresponding instruments to a note on the stave. This was done because of the excess of instruments that each percussionist uses, allowing just one stave for each timbral area, creating an easier score to read. The fourth percussion part only requires one stave for all timbral areas of non-tuned percussion due to the small number of instruments used (example 3.2).

Example 3.2, (key for non-tuned percussion)

[7] Arnold Schoenberg (ed. Gerald Strang): *Fundamentals of Music Composition* (Faber and Faber ltd, 1970), p. 82.



Three of the four percussionists in *Percushett* concentrate mainly on the non-tuned percussion, while the majority of the fourth percussionist's attention is focused on

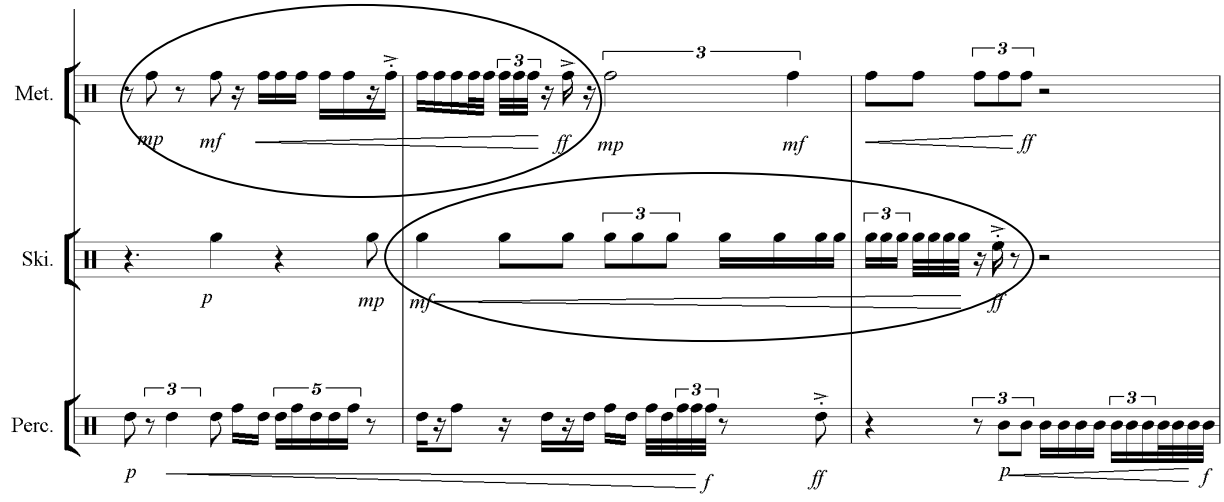
tuned percussion. The fourth percussionist is in control of the timpani, vibraphone, glockenspiel and xylophone. Rubber-headed sticks help to render smooth transitions between all instruments throughout the performance. The size of some instruments means that a specific arrangement is needed for each percussionist to enable the performance to be successful

The placement of instruments is vital. Each percussionist has quick changes that need to be as efficient as possible to allow for the easiest transition between timbres. The majority of non-tuned percussion instruments must be placed on stands due to the high speed of changes. There are exceptions to this, for example where the tambourine and maraca are needed to provide their shaken sound. In this instance a table is provided for any instruments that need to be hand-held.

To allow these transitions to occur, an arrangement for the positioning of instruments is needed that will best suit the internal structure. The performance layout is in an arch shape, mainly so that all instrumentalists can communicate with each other for timing, the clarinettist being at the centre. The first and fourth percussionists are placed on the outsides of the arch shape. This part of the set-up is structured so that the tuned percussion, which is most prominent in the first and fourth groupings, can be spread out evenly. This creates space from the clarinettist, enabling a prominent sound from each melodic section. The second and third percussionists are set up either side of the clarinettist, allowing opposition between the congas and bongos. A strong sense of satisfaction can be achieved from the composition of percussive music through the rhythmic power that can be derived from such instrumentation. Other percussion compositions such as *Marimbas* (1992) and *Music for pieces of wood* (1973), both by Steve Reich, make apparent the rhythmic devices and textures

that can be so effective. Many of Reich's compositions use textural themes, based around canons, and layering of texture. *Rebonds* (1987 – 1989) and *Psappha* by Xenakis, both written for one percussionist, use repetition of theme within the music, a distinct passage that on each occurrence is augmented. This theme usually occurs for a substantial amount of time before moving into a contrasting section of different timbres, later returning to the original augmenting passage. Both of these elements are integrated into the music of *Percushett*. For example, Reich's use of texture leads to the use of instrumental layering that moves through frequent changes of timbre, in some places as often as every two beats. Aspects of Xenakis are represented through the use of an accelerating line, augmented on different entries during the exposition and recapitulation. The coda also follows Xenakis, providing a repetitive melodic fragment that evolves on each repetition (example 3.3).

Example 3.3 (bars 12 – 14)



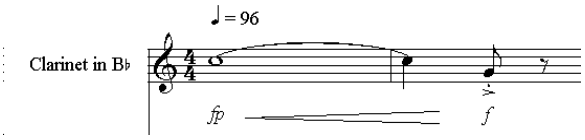
The possibility for creating rhythmic drive in *Percushett* was generated from the combination of percussion with melodic sound not just the percussive emphasis. This melodic material essentially belongs to the clarinet, chosen not only for the cool mellow sound that the chalumeau range offers but also for the wide scope of pitch material upwards of this. The ability the clarinet has to change the feel of the music

with the different tessituras it can play meant there was a wider scope to relate the clarinet with the percussion.

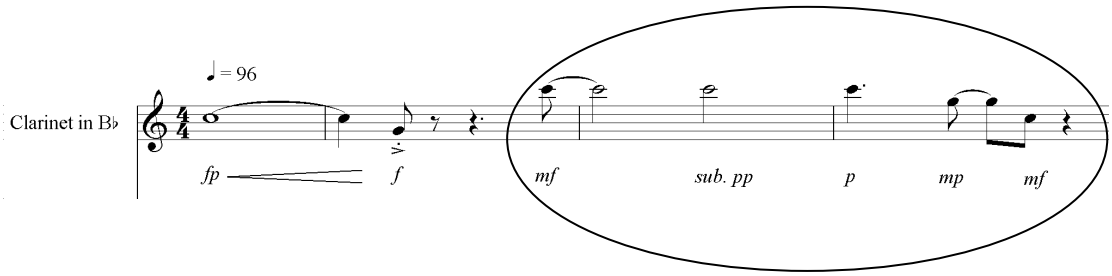
The structure of *Percushett* is very loosely based around sonata form: the material is stated during the opening, developed, recapped and then ended. The piece is structured in three main sections, using a short fourth section to draw the piece to a close. The change in sound emphasises the move into a new section. Each of the sections is referred to as exposition, development, recapitulation and coda for reference through this thesis.

The opening section is made up of several themes of progression, the first example being found at the start of the clarinet part (example 3.4). In this example, the sustained note grows in dynamic value leading into a sudden fall to the staccato G, which is also accented to promote interest. Continuing in the clarinet the previously sustained note, is this time punctuated with syncopation, reducing at intervals of a quaver in length to anticipate the descending pitch (example 3.5).

Example 3.4 (bars 1 - 2)

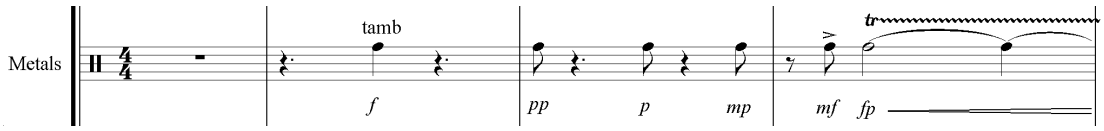


Example 3.5 (bars 1 - 4)



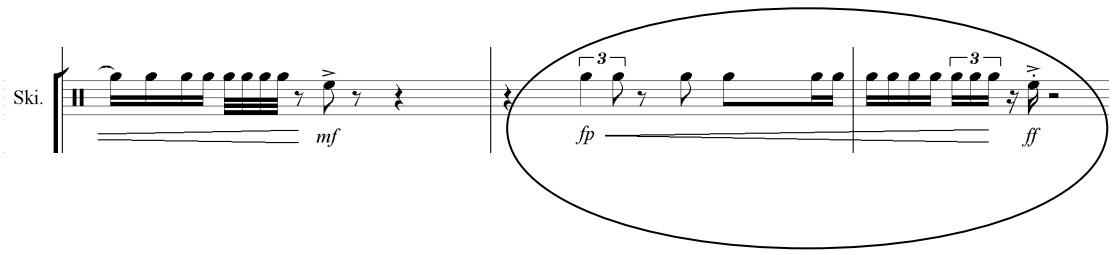
This theme continues in the percussion section, the tambourine being the first percussion instrument to be heard sounding shortly after the clarinet in the second bar (example 3.6). This again follows the same idea of reduction, however, on this occasion it is the length of the rests that are reduced by half a beat. The longer note at the end of the sequence is taken from the first motif set by the clarinet (example 3.4). The instruments that take this sustained note, followed by the accented quaver are notated as a trill to keep the sound constant. This is generally notated for instruments that can create a rolling or shaking effect, for instance, the shake of the tambourine, or a drum roll on a snare drum.

Example 3.6 (bars 1 - 4)



The following additions to the instrumentation are the congas, closely followed by the bongos. These passages follow the same idea again, but this time the lines are used to follow the clarinet's melodic line much more closely imitating the spacing set by the tambourine line (example 3.7). This effect is created using the congas and bongos, high and low pitch drums, imitating the pitch movement of the clarinet, which were created purposely to enable this type of imitation to take place.

Example 3.7 (bars 9 - 11)



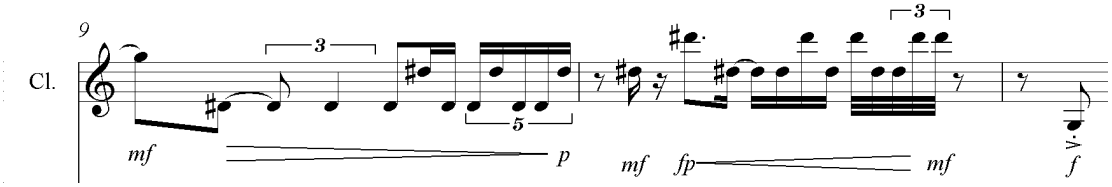
As the opening progresses, the percussion passages start to become more complex, still following the rhythmic theme of note reduction, increasing the momentum, while maintaining a tempo of ninety-six crotchet beats per minute.

The momentum increases as the rhythmic figures become more complex, moving from quavers, semiquavers and demisemiquavers, combining all with triplet figures.

An example of this can be seen in bar 12 where the third percussionist's part builds in momentum as the rhythmic units decrease (example 3.8). This passage is an exact repeat of the rhythm set in the clarinet part at bars 9 – 10 (example 3.9), providing imitation between the melodic and percussive areas, strengthening the bonds between the two areas of instrumentation.

Example 3.8 (bars 12 - 13)

Example 3.9 (bars 9 – 11)



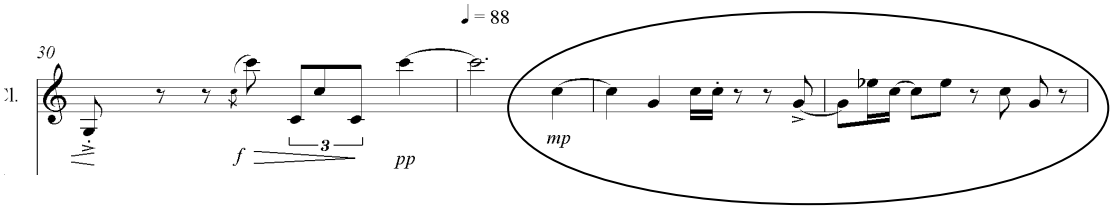
The high and low pitched percussion help provide very strong links between the melodic and percussive areas. Instruments like the congas and woodblocks can imitate the shape of the clarinet's melodic line by mapping out its progression very easily. The use of pitch material in the clarinet was originally limited to facilitate this imitation.

The exposition is organised so that each timbral element of the percussion section is used separately. The opening starts with the use of skin based instruments, congas, bongos and tambourine. The tambourine is used as a bridge to the next change in timbre, combining the skin and metal aspects of the instrument, finally achieving the wood element at bar 27 (example 3.10). It was decided that separation of timbre would continue through the majority of the piece enabling definition between timbres and creating distinction when combined with temporal changes within the music.

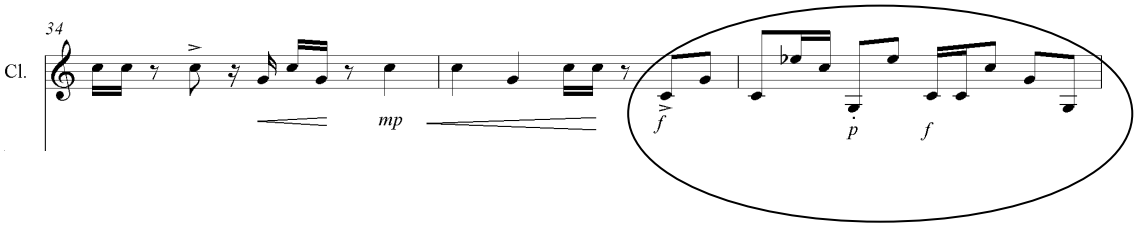
Example 3.10 (bars 27 – 29)

One of the percussive features within the development is found during the gradual combination and groupings of timbre, eventually using instruments from each of the metal, skin and wood families, each percussionist having a two-pitched instrument for imitation. The clarinet material during the development is taken from the first section (example 3.11), and overlapped with itself in the second section, where the same version of the material is set an octave apart and combined into one melodic line (example 3.12)

Example 3.11 (bars 30 - 32)



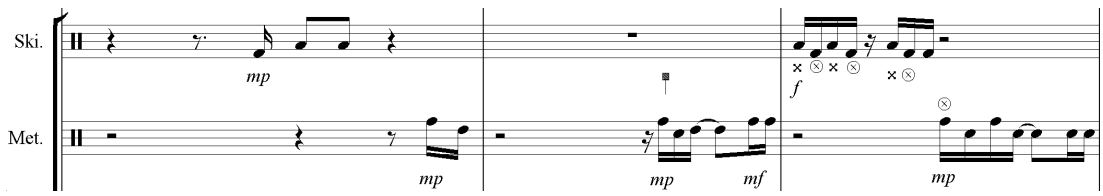
Example 3.12 (bars 34 – 36)



The opening of the development begins with the solo line of the clarinet, the first percussionist entering at bar 36. As the other percussionists make their entries, the timbres build up to combine all aspects of wood, metal and skins at bar 44. This then starts to phase back into the section groupings, and once established, alternate as often as every two beats. By using the rapid timbral changes, the percussion section is able to mimic the momentum of the clarinet line, without copying the movement of pitch in the non-tuned percussion.

Timbre is also altered via the way the instrument is played. At bar 53 the triangle is played with a metal stick, which is not unusual. As the music continues, the third percussionist's part continues with the use of the metal stick on the conga and other percussion until bar 58 where hands are used again (example 3.13). The crosses indicate beats that continue to be played with the metal beater, creating a sharp crisp sound, while the circled cross is the hand played beat that is to be performed conventionally, which provides a natural dampening of the sound.

Example 3.13 (bars 52 – 54)



The addition of the tuned percussion to the development is what reinforces the already established bonds between the clarinet and non-tuned percussion, strengthening the rhythmic elements as they combine with melodic progression. The pitch material is developed quite aggressively during the second section, and although the non-pitched percussion can still follow the patterns to some extent, the tuned percussion links the two areas of instrumentation together imitating some of the finer pitch patterns. The introduction of tuned percussion during the development leads to a stronger progression within the recapitulation, where the melodic lines become even more significant. During the development, the tuned percussion provides an echo of what the clarinet plays. In the recapitulation the melodic material of the clarinet starts providing some of the imitation, with the tuned percussion taking the melodic

material before it is heard in the clarinet. The clarinet and tuned percussion work in conjunction with each other to provide the melodic material, each part providing the lead on certain melodic fragments while imitated in others.

The non-tuned percussion instruments in the recapitulation are broken away from their timbre groupings, and merge for the duration of the section. These combinations (which occur briefly within the development) enable all the sounds to reinforce the relationships between instruments through the different timbres that are brought to life throughout this composition. More variety is created among the sounds produced while keeping rhythmic devices in place. The non-tuned percussion also keeps its links with the clarinet alive, imitating and augmenting rhythmic patterns used by tuned instruments during their melodic lines. Pitch relationships are created using the different depths of timbre throughout the percussion, again mapping the sounds to follow the descending and ascending pitches of the melodic line as closely as possible.

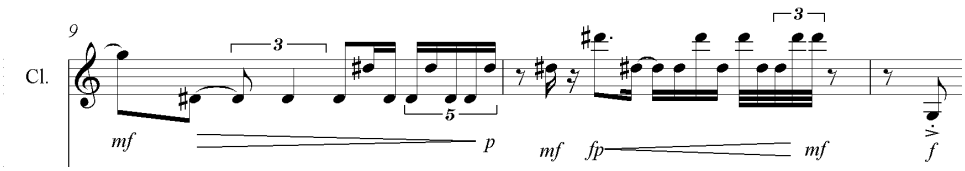
Melodically, the clarinet's main function is to provide the main material from which other aspects of the piece are derived. Originally, the pitches were selected using a method that would give no clue to its outcome. Note names, written down on paper, disclosed from vision and then chosen at random, generated intriguing pitch material, which determined the final tonal route. This method was originally chosen purely to provide structure. Without being predetermined meant that the melody would be a secondary concern although the final outcome produced more melodic interest than was originally anticipated.

The first six pitches become the total used in the clarinet part throughout the exposition, the limitation preventing the clarinet forming too much space between

itself and the accompaniment. This enabled the percussion instruments to imitate within the pitch-related boundaries.

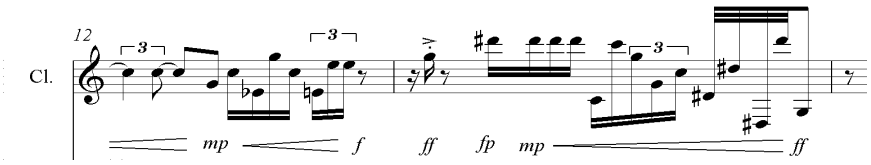
In the opening bars, the clarinet is limited to the notes C and G. The perfect fifth refers to C major, but with no identifying third the music is free to suggest an alternative mode. This limit of two pitches continues for seven bars allowing the congas and bongos to imitate the pattern of the clarinet exactly. At bar 4 the bongos create an echo of what has sounded before while bars 9 to 10 sees the addition of D sharp to the melodic line, used in these two bars in octaves (example 3.14). Bar 29 shows the return of this idea with octave leaps between the pitches of C in the clarinet. This creates an obvious relation to the two-tone, non-tuned percussion.

Example 3.14 (bars 9 – 11)



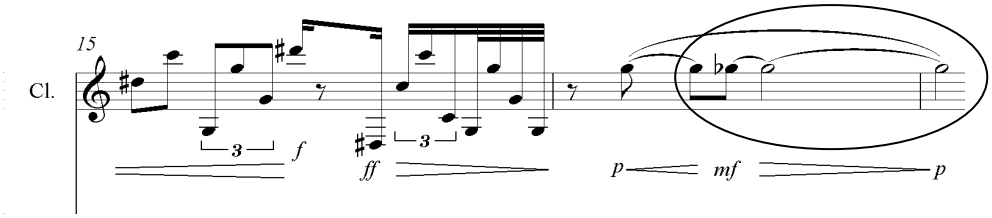
The next pitch additions are found in bar 12 where the E natural is added to the sequence before the D sharp returns again in bar 13 (example 3.15). This furthers the progression of the melodic line, anticipating the clarinet's move away from the percussive dominance during the opening.

Example 3.15 (bars 12 – 14)

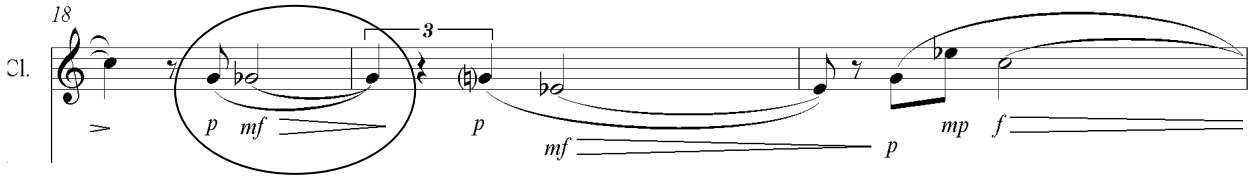


The final addition to the pitch collection is in bar 16, a G flat which is the catalyst for the next section (example 3.16). Positioned after the G natural in the same octave on several occasions, this addition starts to smooth out the line of the clarinet, creating a more sustained melodic feel to the music as the development nears (example 3.17).

Example 3.16 (bars 15 – 17)



Example 3.17 (bars 18 – 20)



Commencing at bar 31 of the development the melodic line becomes more distinct due to the combination of melodic material from the exposition (example 3.18). As part of the development, the clarinet line becomes more substantial through the

extension of this melodic material and the constant rhythmic movement throughout the clarinet part.

Example 3.18 (combined line bar 33 – 36)

The melodic route in this section is made up of one line of material taken from the exposition, (example 3.19), that is combined four beats later at bar 35 with the same line an octave lower (example 3.19). The rhythms are then adjusted so that every pitch sounds, giving the impression that the melodic line is played by two clarinets. The rhythms are depicted by this scheme, where the length of the note is only as long as the time it takes for the next pitch to sound. The following example shows how the theme from the exposition is combined.

Example 3.19 (working progress for combined line)

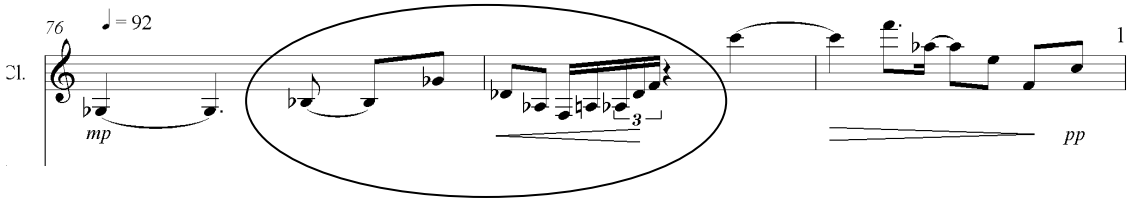
Single line

The development progresses through the accompaniment using the rhythmic progression that the melodic combination in the clarinet creates. During the development of the clarinet's material a more interesting melodic line was desired but with limits to the melodic content to maintain a secure relationship between the two instrumental sections. As part of this progression the pitch content was broadened, adding an F sharp, B natural, D natural and D flat between bars 38 to 41.

The tempo during the development is reduced to eighty-eight crotchet beats a minute, but the velocity of the rhythmic movement becomes one of the main features of this section allowing the momentum created in the opening to continue. Throughout the clarinet line rests are added to break up the melodic material creating opportunities for breathing and generating a new element of space. The complexity of the rhythmic structures and the tempo change during the development section allows the small selection of pitch additions to create a vast difference between that and the melodic line of the opening section.

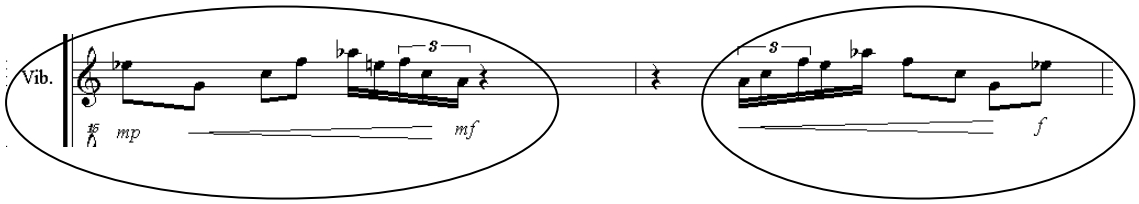
The recapitulation typically brings all the elements of the previous movements together using pitch and rhythmic material. The development produces many melodic phrases, which combined with the strong rhythmic fragments of the exposition, create the framework for this movement (example 3.20).

Example 3.20 (bars 76 – 78)



During the recapitulation the melodic material is at its most important, melodic phrases placed throughout all tuned instruments, establishing the strongest bond yet between the clarinet line and the percussive accompaniment. The melodic structures are subjected to retrograding (example 3.21) and inversions, sometimes set at specific intervals, again increasing the available pitches.

Example 3.21 (bars 76 – 77)

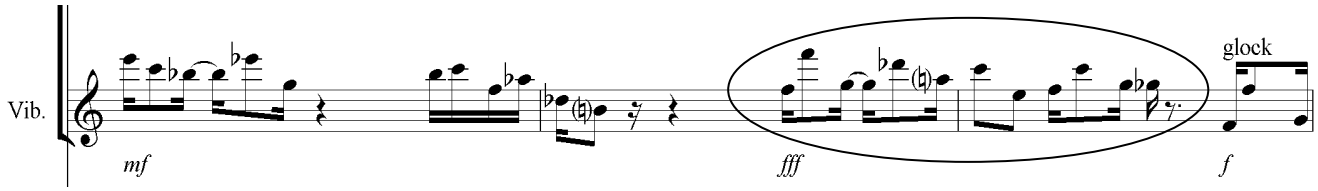


At bar 88 the clarinet's melodic material is inverted and set a third higher in the vibraphone, both sounding on the second beat of the bar (example 3.22).

Example 3.22 (bars 88 – 89)

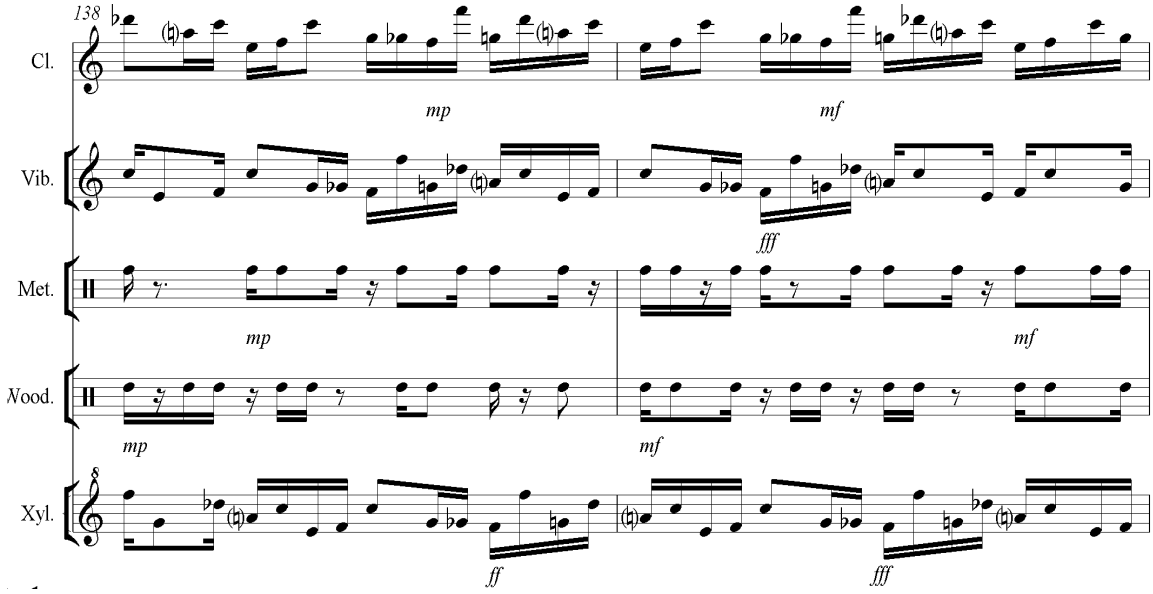
The driving material during the recapitulation comes from the opening statement of the development due to the rhythmic strength and striking melodic progression. The material is placed throughout the tuned instrumentation again allowing strong bonds between the clarinet and percussion. It is mainly the tuned instruments that control the coda, built using the final and strongest fragment of melody from the vibraphone line of the previous section (example 3.23). .

Example 3.23 (bars 133 – 135)



The first percussionist uses the same melodic fragment but this time played on the glockenspiel, reducing the dominance of the line. It is at this point that the music follows the style of Xenakis so prominently, using the same material over again forming a continual melodic pattern (example 3.24). This melodic material is used throughout the tuned percussion and clarinet while the non-tuned percussion imitates the rhythmic patterns that it creates. Each input of the melodic fragment is reduced rhythmically until all tuned instruments play in unison, increasing in dynamic up to this point for a final *crescendo*.

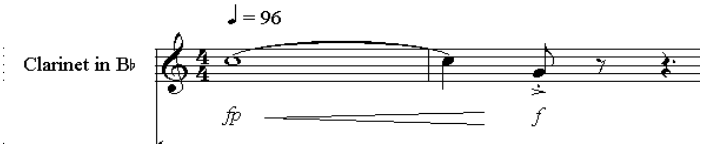
Example 3.24 (bars 138 – 139)



The growing element of the piece is reinforced by the dynamic progression. The opening starts with the five beats held on C, followed by the descent to the quaver G

dynamically painted with a *forte* that falls straight down to *pianissimo*. This is followed by a *crescendo* up to *forte* again as the melodic material moves back to the quaver (example 3.25). The idea here is that sustained notes *crescendo*, and notation that either increases in speed or density of rhythm will increase in dynamic throughout the passage. Use of staccato notation creates an immediate source of interest from the beginning. As the opening figure is extended, the same *forte-pianissimo* figure is used, followed by *crescendo*, however, where the note is held on unlike that of the first statement of the theme, the dynamic is set as a *diminuendo* (example 3.26). This allows the fade of the sustained pitch to blend with the following material, allowing the listener to focus on the next material.

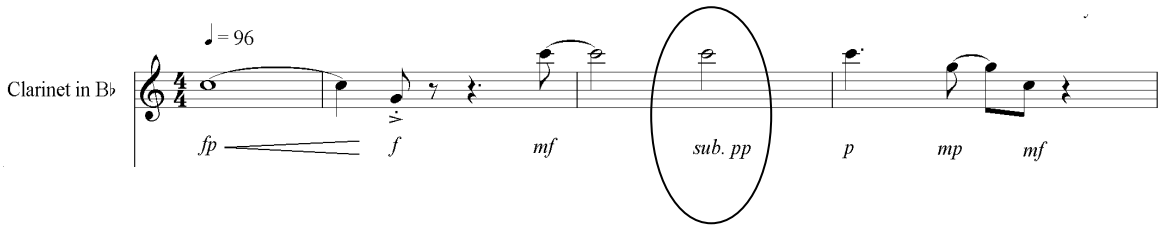
Example 3.25 (bars 1 - 2)



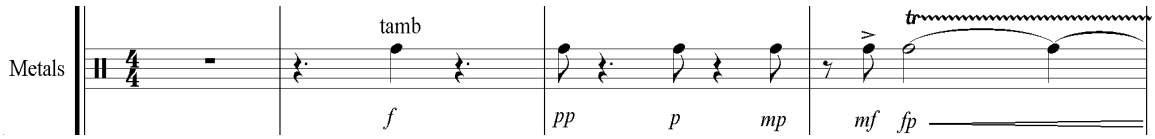
Example 3.26 (bars 5 - 7)

During the clarinet part the second theme of the piece suddenly drops dynamically to *pianissimo* before increasing alongside each preceding pitch (example 3.27) creating opposition where the dynamic increases while the note durations decrease. The clarinet and percussion parts therefore follow the same dynamic structure (example 3.28).

Example 3.27 (bars 1 - 4)



Example 3.28 (bars 1 - 4)



Throughout the piece the music is about the relationships that the percussion has with the clarinet. It was felt that using percussion would create a new opportunity for exploring the versatile nature of the percussion instruments. Percussion being the support for the clarinet meant each section would have its own importance, while texture and timbre works throughout the two sections to provide unity.

On many occasions a solo piece is performed with a similar format accompaniment, often piano. This format has become over used, and not enough composers have ventured out of this comfort zone. It was felt that by using percussion as the stronghold for a solo work, I could further the journey from that comfort zone, and therefore set myself the task of finding relationships between each area of timbre.

Dynamics have been imitated between clarinet and percussion; rhythmic structures have been used extensively throughout the clarinet line and the accompaniment and

melodic shape have been effectively transformed into the percussive structure. While the non-tuned percussion cannot produce a named pitch as such, instruments like bongos, woodblock, tom toms, can follow pitch patterns, moving to their higher sounding drum or woodblock to imitate the movement that the pitch progression takes. In some instances, predominantly within the recapitulation, the non-tuned percussion has been mapped out so that each timbre corresponds to a certain pitch within a melodic passage. Tuned percussion has also been used allowing a more melodic aspect to the percussion section to take place. The two areas of solo line and accompaniment combine to create a whole piece, where the percussion is essential to the performance and the solo line is lost without the solid grounding that the percussion creates, completing the function of the piece.

Seven Songs

Having previously composed a short choral work and having sung as part of a female *a Capella* quartet, there was a strong appeal towards the idea of writing a song cycle. With this in mind, and knowing that few modern scores are obtainable for two sopranos and two altos (compared to other vocal arrangements), creating this song cycle for four female voices became an exciting concept. This vocal combination needed to be explored, pushing vocal abilities to their limits to create a work of a difficult standard that would flourish with rich textures and harmonies.

The theme throughout the seven songs is based on the process of living, moving through different stages of life and emotions, all taken from the poems of the twentieth-century American poet, E.E.Cummings. Cummings wrote many poems following the same theme, often linking the process of living with nature and beauty, which are present within the poems chosen for this work. This means that to perceive the overriding theme of the piece, all seven songs must be performed together as one, where each song provides a different stage of life or emotion. This does not mean that the cycle cannot be split for individual performances, only that each song will then retain its unique meaning rather than contributing to an overall theme.

At first, Cummings's poems can often be perceived to be purely about an object or creature but in every instant there is a deeper meaning. Within the selected poems there is always a sense of beauty in living, although this is not always perceived upon first reading. The poems pick up on the features of life that we may ignore or allow to pass us by. These include singing birds, sunsets and twilight, winter afternoons, months of the year, heaven and earth, which all become apparent within the majority of the songs, helping to portray the relationship of the individual to the world.

A number of composers have set Cummings poems because of the graphic manner in which he sets out his text on the page. Such composers include Luciano Berio in his work, *Circles*, who's interpretation of the text paints the sound, and Paul Hillier who uses the beauty of Cummings verse in his piece for solo voice, *Experience No.2*. *Cummings* presents his text in a complicated way; full sentences can be on more than one line with spacing often more than that of a standard literary text. In some instances words can be split between lines, where capital letters and punctuation appear in unexpected areas of the text, often interrupting the natural flow of speech. These features create a deeper meaning to the words used by Cummings, providing inspiration to the composer through their interpretation of the meaning that his alternative method of syntax creates.

The realisation of Cummings use of the English language and what he was trying to achieve in his text seems to relate to the removal of familiarity: 'Best understood as various ways of stripping the film of familiarity from the language in order to strip the familiarity from the world. Transform the word, he seems to have felt, and you are on the way to transforming the world'.[8] The idea behind removing the usual text setting encourages the reader to be more open-minded. Removing the rules emphasises the inner meaning of natural beauty that Cummings favours so often.

Luciano Berio set Cummings's poems, in his piece, *Circles* (1960), orchestrated for voice, harp and two percussionists. Berio selected three of Cummings poems, *stinging*, *riverly is a flower* and *n(o)w*, and created an arch form of five movements. *n(o)w* is the poem at the centre of the arch form, while *riverly is a flower* encircles the third movement, and the first and final movements set the poem, *Stinging*. The third

[8] Norman Friedman: *E.E.Cummings, A Collection of Critical Essays: The meaning of Cummings* (Prentice-Hall Inc, 1972),

movement is the freest in its notation and expression, Berio requiring a technically demanding performance from the vocalist, as well as having to combine this with the use of percussion instruments.[9]

n(o)w comprises text that very rarely consists of spaces between words. Example 4.1 shows its drastic layout of text, exchanging standard grammar with Cumming's unique alternative that creates riddles for the real, underlying meaning. In some instances it can be difficult to work out exactly what the text portrays, which allows the composer either to resolve the riddles, or to create a musical conflict to represent the meaning and visual representation of the text.

Example 4.1 *n(o)w*

at
which(shal)lpounceupcrack(will)jumps

of
ThuNdeRB
LoSSo!M iN
-visiblya mongban(gedfrag-
ment ssky?wha tm)eani ngl(essNessUn
rolli)ngl yS troll s(who leO v erd)oma insCol

Lide.!high[10]

During this central movement, Berio uses the convoluted text to accentuate different elements of the words within the poem. Capitalisation is often prolonged or accented, while bracketed words are often whispered. Where the placement of brackets

[9] Arnold Whittall: *Musical Composition in the Twentieth Century* (Oxford university press, 1999),
p. 302.
[10] E.E.Cummings: *Complete Poems* (Granada Publishing Limited, 1981), p. 348

interrupts mid-word, the pitch will often move by large intervals within that text. Punctuation that interrupts text finds use in a similar way, Berio often using vocal accentuation to portray what is written into the vocal line. During the first movement, the final word emphasises the 'S' of dreams, set on a new line and capitalised. This is written into the music so that the vocalist transforms the 'S' into a long hissing sound, which is continued by the percussion section.

There is a great deal of harmonic variation between *Seven songs* and *Circles*, *Circles* being the more noticeably atonal of the two. *Seven songs* often pass through substantial chordal phrases, painting the text into the harmonic scheme of the song cycle. Punctuation and capitalisation combined with the natural speech rhythms that occur through Cummings text are all used to paint the music of the cycle in ways similar to Berio. The main difference between *Circles* and *Seven Songs* is through its emotional content, *Circles*, containing fewer of the more emotional themes rendering the music quite atonal because of this, *Seven Songs* uses a more intense array of emotions enhanced by the harmonic progressions throughout the piece.

While great detail was considered for poem selection, the final positioning of each poem was only decided once all the songs were composed. Factors such as content and tempo of each song were one of the main considerations for the final determination of the overall structure. Tempos were also considered, starting and ending at a similar speed, with *if everything happens that can't be done*, the fastest piece of the song cycle positioned at the centre of the structure as shown below (example 4.2).

Example 4.2 (table of song order and structure)

Position of Song	Song Title	Structure	Tempo
Nine birds(	*Nine birds(rising*	AB	Crotchet = 88
2	*The little horse is newlY Born)*	ABA	Crotchet = 96
3	*Now, (more near ourselves than we)*	Sonata form	Crotchet = 66
4	*If everything happens that can't be done*	ABA	Crotchet = 100
5	*Voices to voices*	ABACA	Crotchet = 96
6	*One winter afternoon*	A – aba B – cbab A – aba	Crotchet = 88
7	*FINIS….Over silent waters*	ABA	Crotchet = 72

Within the overall theme on the progress of life, faster tempo settings resemble the more hectic phases of living, while slower speeds relate to the beauty relayed in the text.

The opening song, *Nine birds(rising* portrays an image of birds flying high in what is described as 'a gold moment', followed by the rising of souls. This is a fitting start to the cycle as the words suggest that glory can be found in both living and dying, summarizing what the song cycle is all about. Set at eighty-eight crotchet beats a minute this poem is used as a map of the piece providing an outline of the journey that the other six poems witl take the audience through. The second song, *The little horse is newlY Born)*, set at ninety-six beats a minute, picks up in speed portraying the excitement incorporated with the early development of life. This poem refers to a newly born foal making use of its senses to explore the world for the first time. The

poem is placed second in the cycle to generate the first instinct of life and the instigation for the theme of 'living'.

Third in the song cycle, *Now, (more near ourselves than we)*, represents a bird and its responsibilities through life. The imagery refers to an awareness of family values as well as a love for them. This is combined with a strong sense of what life is about and the realisation that nothing can be taken for granted. The slower tempo setting throughout this song allows for lingering harmonic moments to prevail alongside prominent melodic lines both used to paint the bird's surroundings and emotions throughout the piece.

The original idea for placing *If everything happens that can't be done* in the middle of the song cycle came from the tempo setting and rhythmic content. The text for this poem is full of rhythmic drive, generated by words and sentences that provide natural flowing speech rhythm that was then incorporated into the rhythmic movement of the song. This rhythmic movement was combined with a fast tempo to create an intense burst of momentum painting the constant routine of life with the driving rhythmic movement. This created a very different song from the others in the cycle, enabling the song's transition into being performed on its own if required. The text in this poem refers to how life can be wasted and how the beauty around us should be viewed by ourselves rather than being seen through someone else's eyes.
Voices to voices is the fifth song of the cycle, positioned here because of its similarity of tempo to the previous song, this time moving through more melodic material compared to the rhythmic progression of *if everything happens that can't be done*.

The text in *voices to voices* portrays considerable emotion, opening with the suggestion of life being a 'peculiar form of sleep' while present in heaven. The text paints imagery of flowers versus machinery relating this to a statement of fate, questioning whether or not it can be changed. The 'rose' is used to state that no matter what we believe in, it will keep growing and we should just enjoy our surroundings rather than having to justify them. The last verse indicates that whether we are dreaming or not our surroundings are there to be embraced rather than understood (example 4.3). The mechanical representation of the poem relates to manmade science and technology to try to justify what is present in the world. The meaning of the poem seems to indicate that we should discard what humans try to control and accept and enjoy the world for what it is.

Example 4.3 (*Voices to voices*)

> each dream nascitur,is not made…)
> why then to Hell with that:the other;this,
> since the thing perhaps is
> to eat flowers and not to be afraid[11]

The sixth poem starts the reduction of tempo back to eighty eight crotchet beats a minute. It is here that the melodic material and rhythmic syllables of the text are perceived equally throughout the poem. The rhythmic units combined with the rhythmic drive of the text (example 4.4), portray the outline of a person and the fact that this presence wants to be taken seriously following strong syllabic suggestion, mapping out text such as 'otherwise democratic', or 'ethereally serious' (example 4.5). While the melodic material reverts to the beauty in the situation that is occurring. This poem refers back to death, in this instance as an encounter rather that

[11] E.E.Cummings: *Complete Poems* (Granda Publishing Limited, 1981), p. 802

part of the living process. The text is about someone who meets a clown, visible only to the character of the poem. This clown is perceived perhaps to be an angel, or maybe even a ghost, either way the clown's actions brighten the day for the character within the poem, finally offering a flower (example 4.6). The character who confronts this clown sees the beauty in what the soul does for them although they are aware that they are not real.

Example 4.4 (*One winter afternoon*)

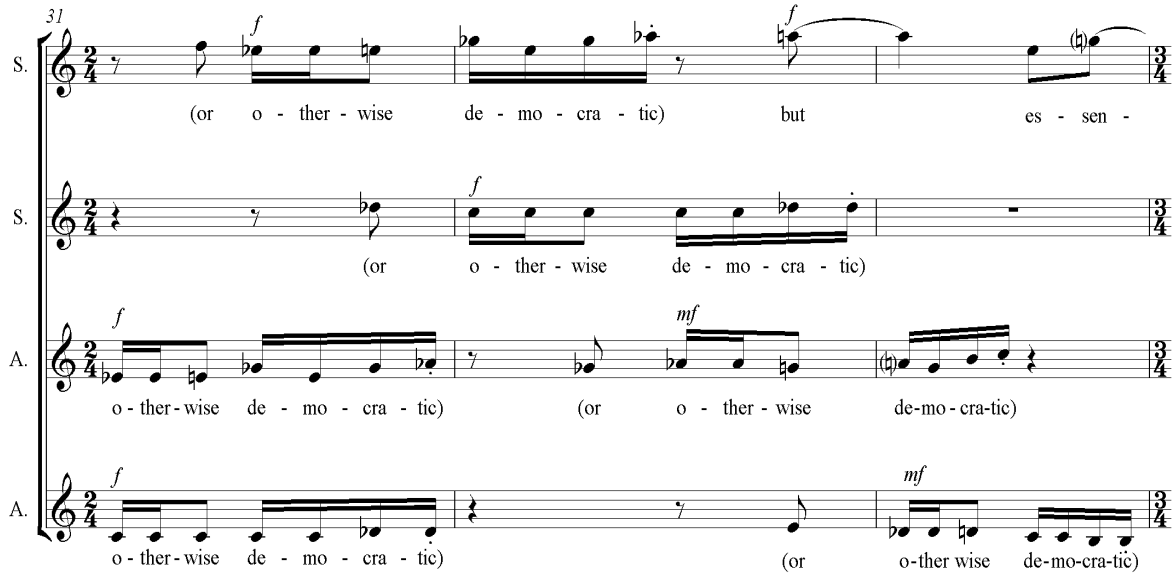
With not merely a mind and a heart

but unquestionably a soul-
by no means funereally hilarious

(or otherwise democratic)
but essentially poetic
or ethereally serious:[12]

Example 4.5 (*One winter afternoon*, bars 31 – 33))

[12] E.E.Cummings: *Complete Poems* (Granda Publishing Limited, 1981), p. 802



Example 4.6 (*One winter afternoon*)

without any doubt he was
whatever(first and last)

mostpeople fear most:
a mystery for which I've
no word except alive

- that is,completely alert
and miraculously whole;

with not merely a mind and a heart

but unquestionably a soul –[13]

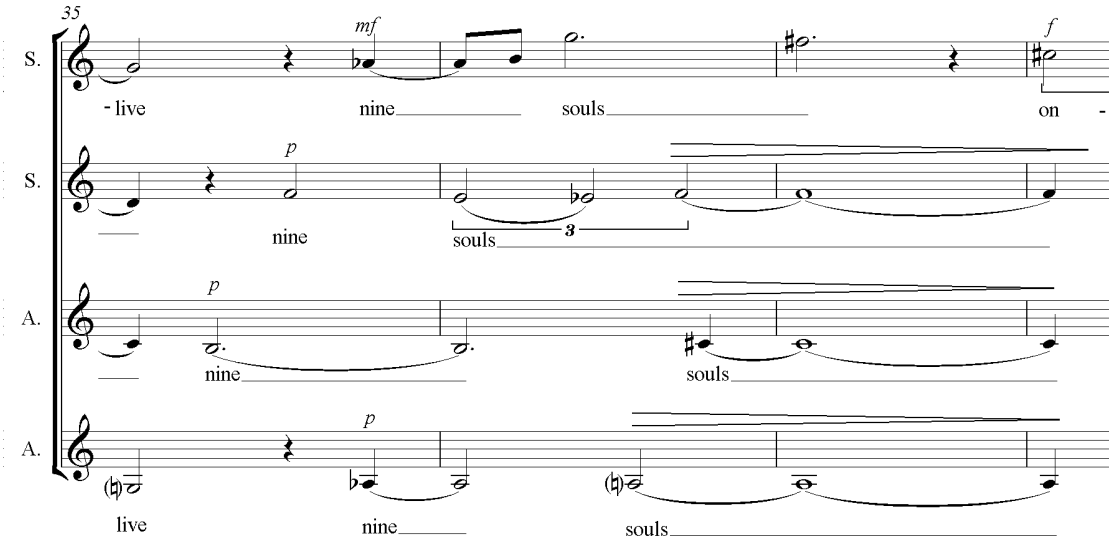
The final song of the cycle, *Over silent waters*, sees another reduction again in tempo, leading to the return of harmonic progression and suspensions found in the first song. The text sets the scene of someone who is taking in the beauty of their final sight, a favourite view, the sunset over still waters. It is here that their life ends and the beauty of what they have just seen is taken to heaven with them where they can still

[13] E.E.Cummings: *Complete Poems* (Granda Publishing Limited, 1981), p. 802

see their perfect sunset. This imagery shows that living and dying can be glorious and that our memories will stay with us up to heaven.

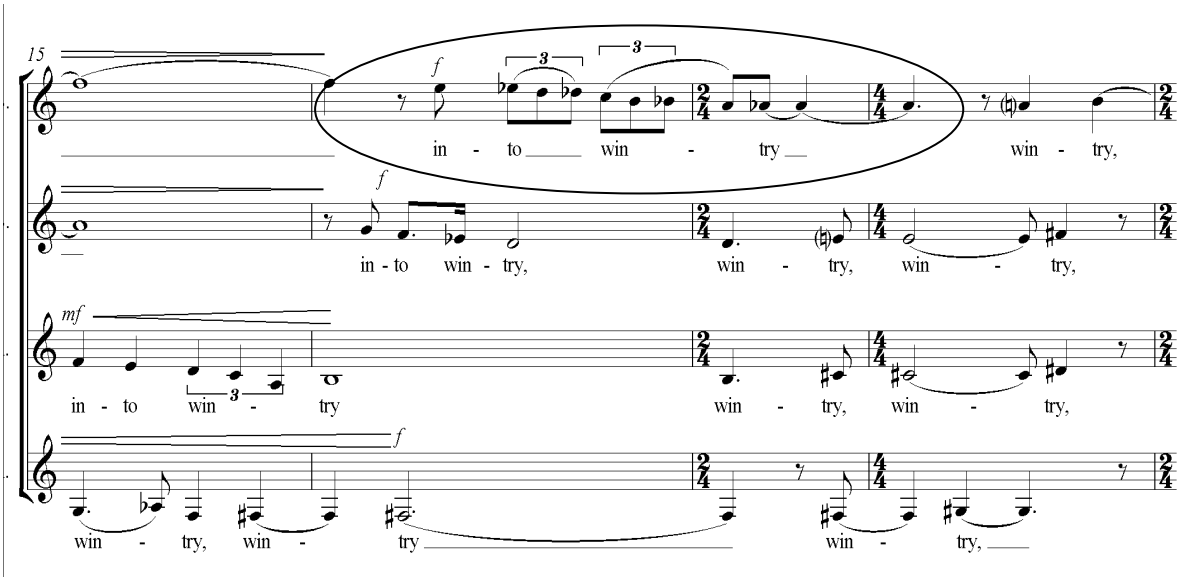
The majority of the pieces in this song cycle use word painting while others rely on the rhythmic structure of the text. In the first song, the text structures the compositional process, the A material focusing on the living theme through the text 'rising birds', with the B material commencing where the word setting reverts to death and the text 'rising souls'. Word painting is used through devices such as ascending pitches that rise in sequence with the 'rising birds'. When the text reveals the rising of souls the harmonic painting starts to echo an eerie feel of the unknown, life after death. This is found in bars 35 to 36 where the music rises to the G in the first soprano depicting the soul rising, which, set against the low A flat in the second alto, generates the eerie dissonance of the spirit (example 4.7).

Example 4.7 (*Nine birds(rising*, bars 35 – 38)

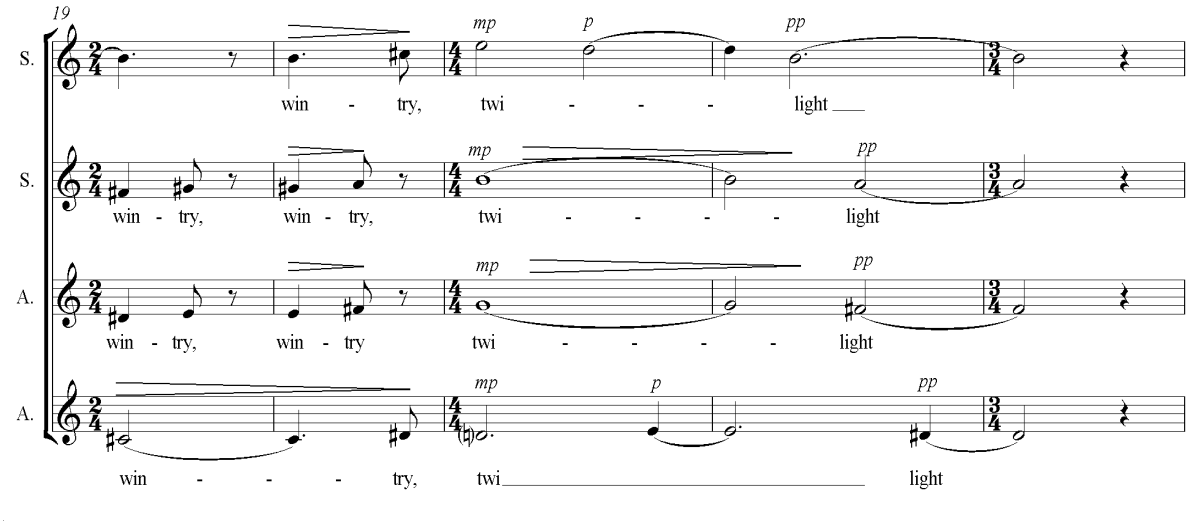


The octave distance between these two parts allows the closely related pitches to work in conjunction with each other, allowing notes that in close proximity would create tension, but when separated by an octave, resemble the eerie sensation of these souls rising . Bar 15 is another example of word painting where the text 'into wintry' is portrayed with a descending chromatic passage depicting the decline in weather, seen in its full extent through bar 16 of the first soprano line (example 4.8). This chromaticism creates a distinct movement from that which is glorious, 'a gold moment' to that which seems to be less welcome, the onset of winter. This continues until the end of the passage where twilight is achieved, the music again brightening with the use of suspensions to show the beauty of the sight the text describes (example 4.9).

Example 4.8 (*finis – over silent waters*, bars 15 – 18)

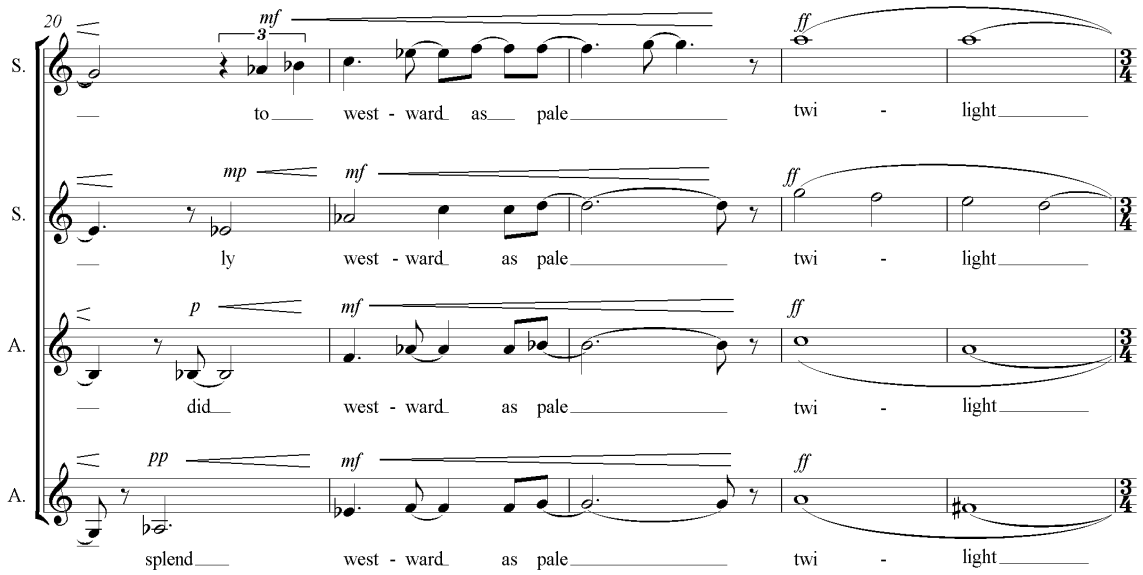


Example 4.9 (*Nine birds(rising*, bars 19 – 23)



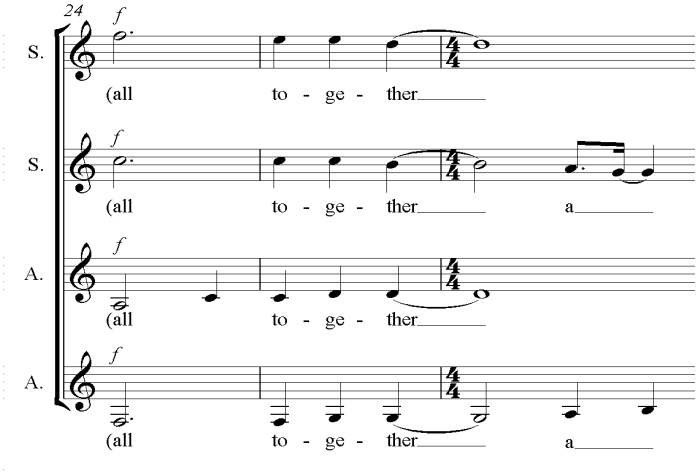
The same harmonic idea is used in the final song, *Over silent waters*, where the text 'twilight' is depicted in the same way, using suspensions in bars 23 and 24 (example 4.10).

Example 4.10 (*finis – over silent waters*, bars 20 – 24)

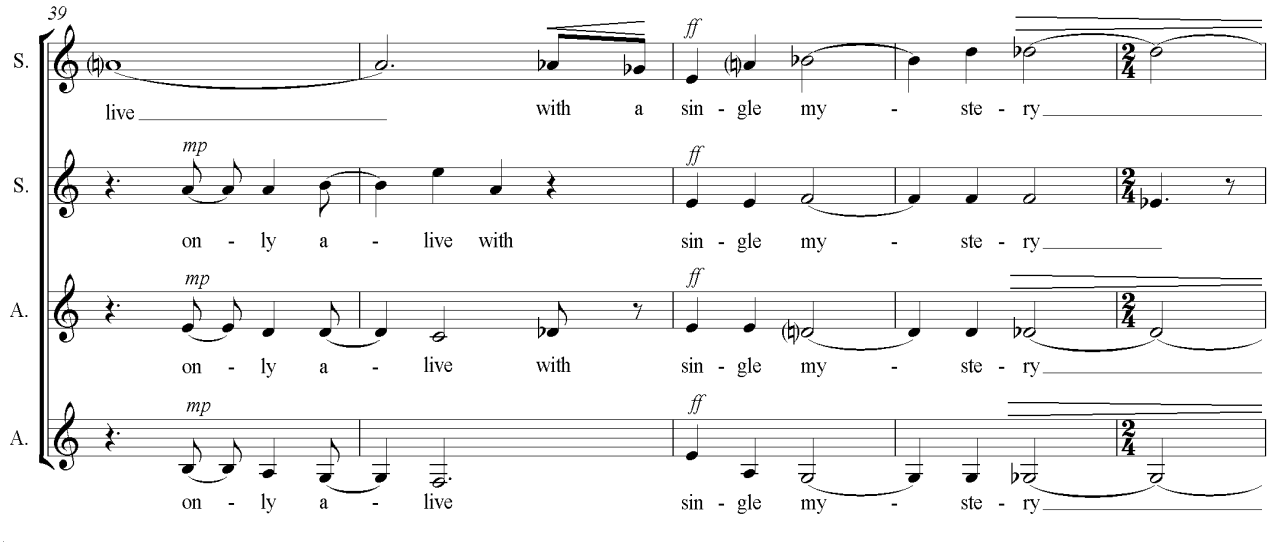


The first song of the cycle also makes use of many textural devices to paint the passage. Strong statements of texture first become evident at bar 24 where the words, 'all together a manying oneness' are painted texturally with homophony, showing the passage moving as one, as the text suggests (example 4.11). The device is also used alongside the words 'with a single mystery' at bar 41, used to paint the 'single' aspect of the text, again creating a united 'one' sound (example 4.12).

Example 4.11 (*Nine birds(rising*, bars 24 – 26)



Example 4.12 (*Nine birds(rising*, bars 39 - 43)



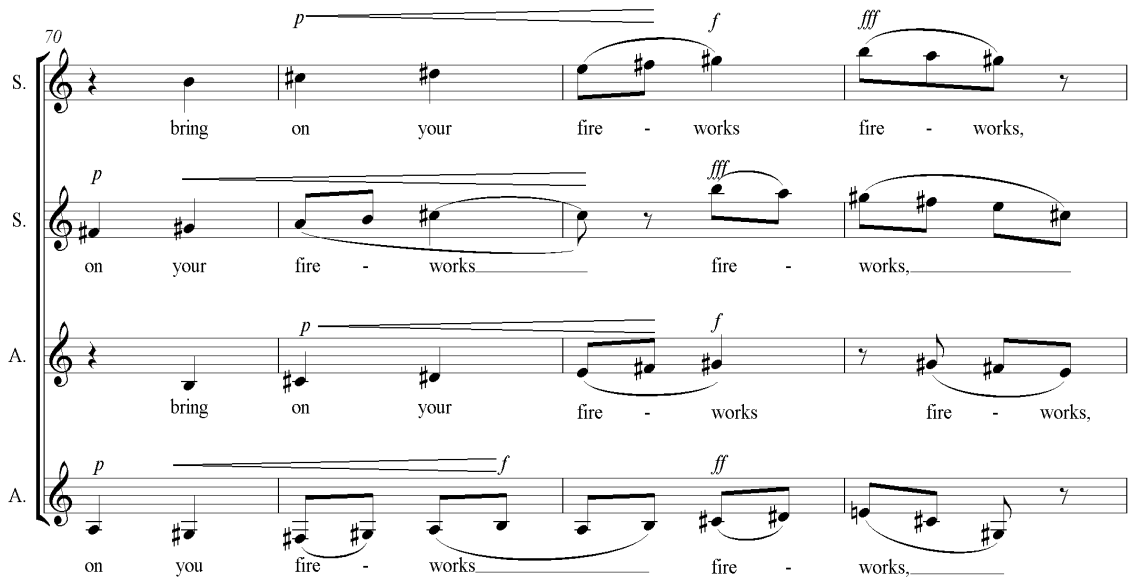
In the final song of the cycle, word painting is at its strongest, the piece being the image of an expansive stretch of water over which someone is viewing this picturesque sunset. Throughout the first five bars, the first word of the poem 'over' is repeated, juxtaposing quavers with a triplet crotchet figure, eventually reaching a sustained pitch relating to the settling waters of the lake (example 4.13). This technique is used again at the end of the poem where the same text draws the song to

a close. Here the rippling effect is repeated while reducing in momentum until the piece rests, to create the water's return to stillness.

Example 4.13 (*finis – over silent waters*, bars 1 - 5)

Word painting is used throughout all of the songs in the cycle, either creating an effect described by the text, like the rise and fall of the melodic line that represents 'bring on your fireworks' (example 4.14), or by following syllabic rhythm to reflect extremes in emotion or a political stance throughout the text.

Example 4.14 (*Voices to voices*, bars 70 – 73)

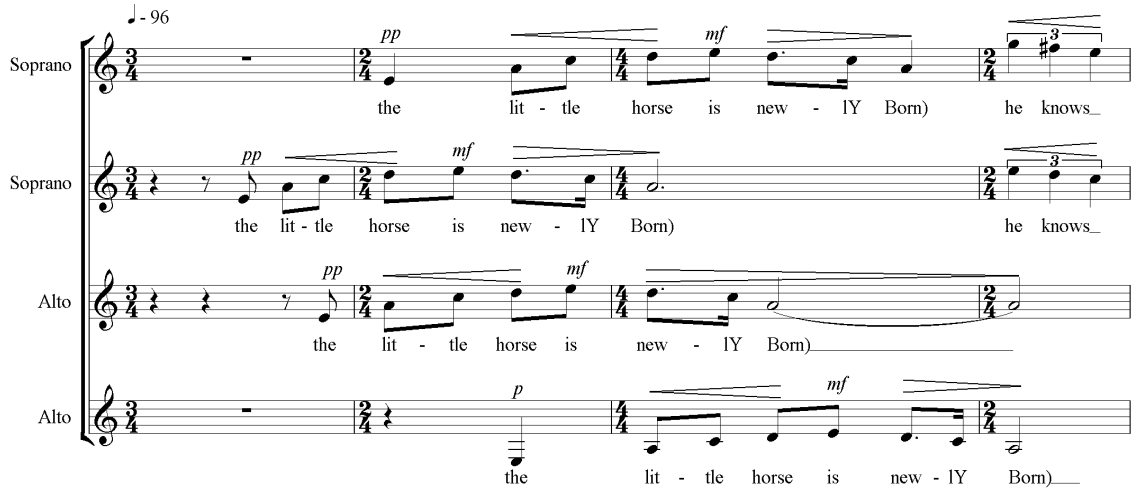


The seventh song is structured with a ternary form of A B A, using the text 'trembles into darkness' to create the B material. The opportunity to create this trembling darkness is achieved by means of a harmonic as well as rhythmic contrast, moving through many major keys from the A section into the B section of F minor. The minor key interacts with the rhythmic statements allowing the darkness within the text to rise alongside the dynamics, through the layering of the melodic line, increasing in tension throughout the passage (example 4.15). The texture thickens from the second alto upwards, while the dynamics are set at *piano*, creating a rumble, which then expands into large trembling as the dynamics increase to *fortissimo*.

Example 4.15 (*finis – over silent waters*, bars 29 – 31)

The A section of the second poem, *the little horse is newlY Born*, begins with the opening line of the poem, first used by the second soprano, then continuing in canon throughout the other parts (example 4.16):

Example 4.16 (*The little horse is newlY Born*), bars 1 -4)



This short canonic sequence is used regularly throughout the song, occurring in bars 10 to 13, 32 to 35, 38 to 41 and 44 to 46 (example 4.17)

Example 4.17 (*The little horse is newlY Born*, bars 44 – 46)

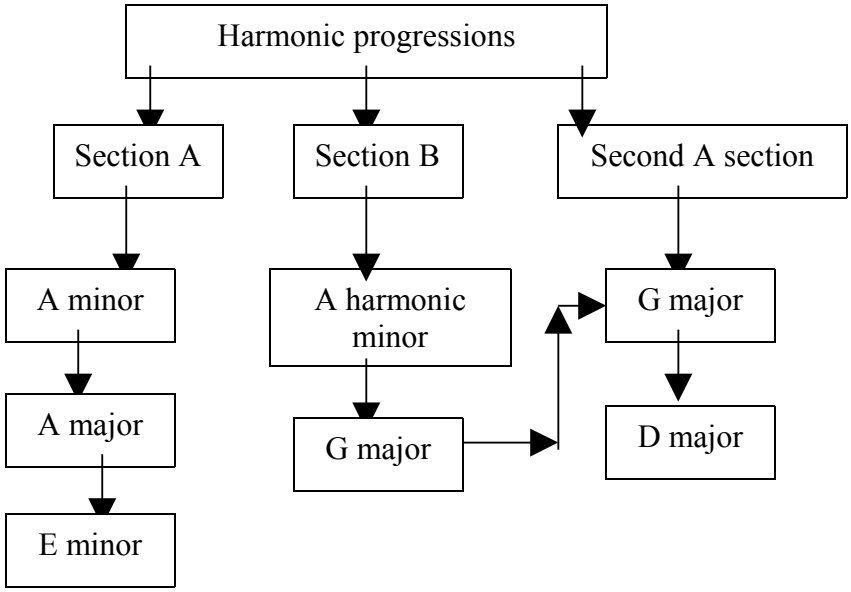
While the growing canonic texture creates the A material of this ternary form, the B material, found in bars 20 to 28, moves out of polyphony into a more homophonic expression of the text (example 4.18). The two sections have different roles to play: the A section embellishes the narrated storyline while the B section focuses on the realization of the surroundings, the newly borns subjective point of view.

Example 4.18 (*The little horse is newlY Born*, bars 20 – 27)

The harmonies in *The little horse is newlY Born)* are predominantly consonant painting the first concepts of life in a most natural environment although it does not have a key signature. All the songs within the cycle extend harmonically beyond one or two keys. Each song is constantly moving around harmonies and atonal references, *The little horse is newlY Born)* travels through a number of harmonic progressions and at great speed, mimicking the descriptive text of new surroundings, while keeping

the harmonies simple to reflect the natural aspect of new life within the piece (example 4.19).

Example 4.19 (*Journey through keys for The little horse is newlY Born*)



Dynamics are also painted in relation to text description, following phrase shape, often increasing with the upward movement of pitches and decreasing as the melodic line descends. During *The little horse is newlY Born)* the material is accompanied by *fortissimo* dynamics, accentuating the richness of the beauty described by the text. At bar 42, the word 'breathing' is composed using a *crescendo* swell to interpret the inward take of air, followed by a *diminuendo* as the air is exhaled (example 4.20).

Example 4.20 (*the little horse is newlY Born*, bars 40 - 43)

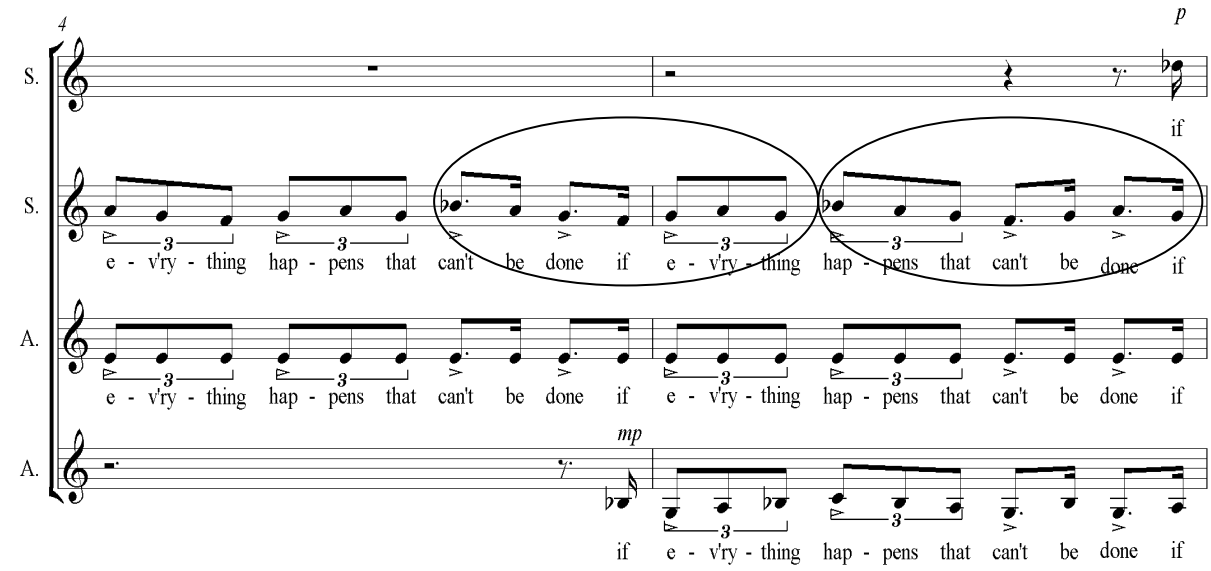
Increments of dynamic are used to great extent throughout the pivotal song *if everything happens that can't be done*. Here, the dynamics increase as the texture thickens, following the same process for the first, second, fourth and fifth verses. The five-verse structure allowed the use of the third section of the poem to create the B material of another ternary structure. From bars 40 to 60 the B section comprises a melodic line used in canon throughout all the parts that repeats itself in each vocal range as the texture thickens.

This central song of the arch form uses the text as a descriptive source where the word painting follows the strong rhythmic setting to portray the constance of life. At first, the main attraction to this text was its syllabic rhythm but it was later justified within the scheme of the cycle through the themes of love and nature.

The first thought was to keep each voice on one pitch throughout the main opening of each verse within the A sections but the solo melodic line was not enough, even though the rhythm has a very strong presence. This led to the inspiration of a melodic

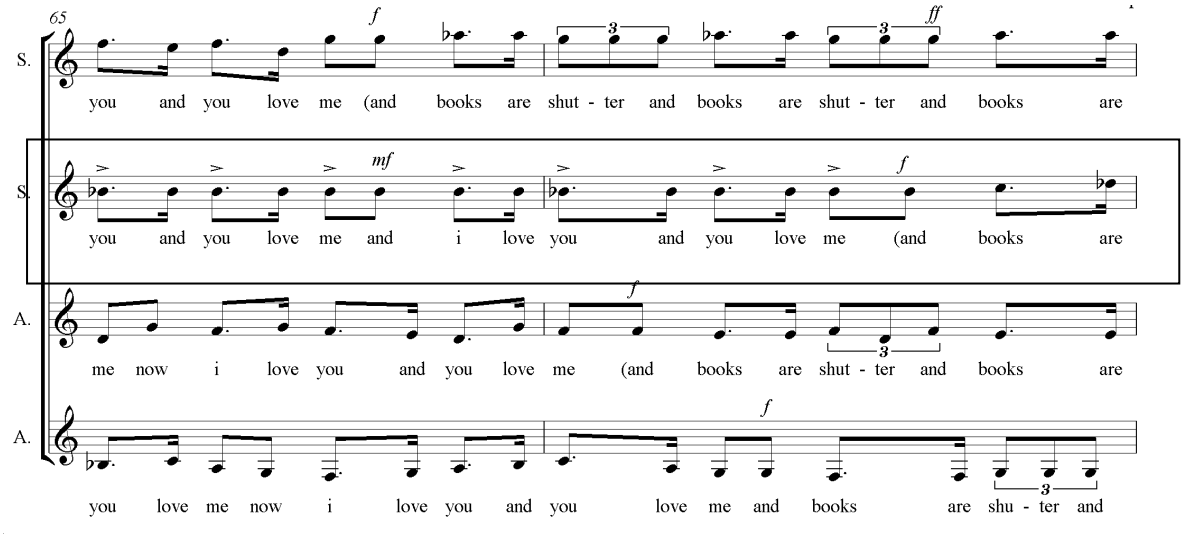
line used by each voice that would deviate considerably for each vocalist, increasing in texture and dynamic through each verse. From this point, each vocal line followed its own melodic sequence, accents punctuating the discriptive text, propelling the music forward (example 4.21).

Example 4.21 (*if everything happens that can't be done*, bars 4 – 5)



The second stanza sees the introduction of longer notes following the same structure as the first verse. In some instances accents are used to emphasis the text that refers to a specific person (example 4.22)

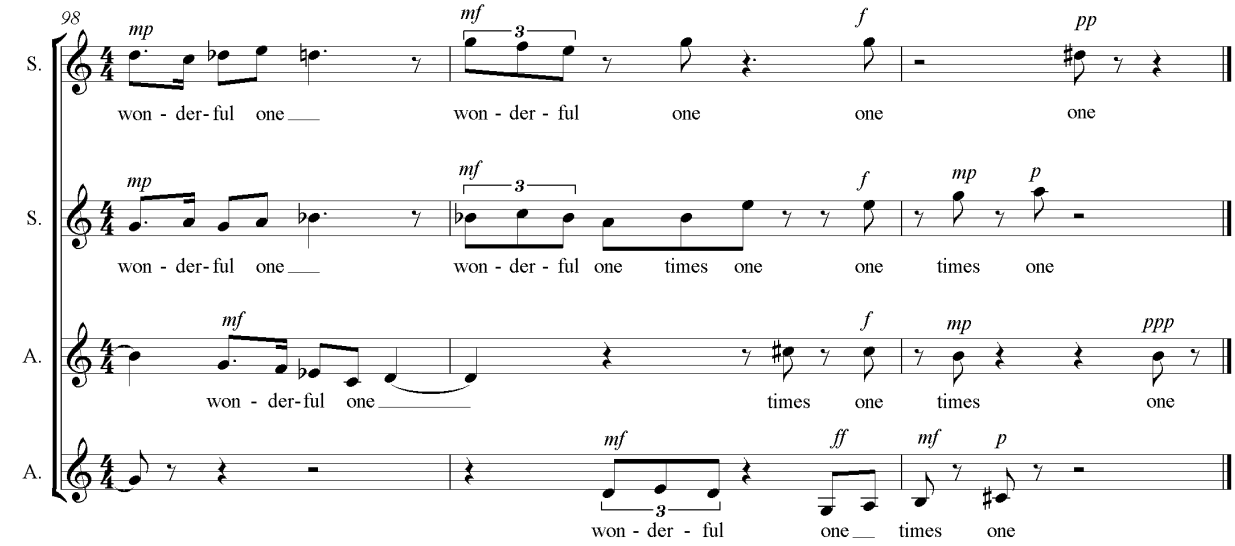
Example 4.22 (*if everything happens that can't be done*, bars 65 - 66)



The only form of word painting in this song is during the B section, following the melodic line of the third stanza through the words ‘up’ and ‘down’, often using bracketed words at different dynamic settings in relation to text outside of the brackets, altering as the relationship of text changes (example 4.23). At the end of the piece word painting illustrates the text ‘one times one’, moving the text throughout the parts (example 4.24). The second Alto part which takes this line has to stretch capabilities to pick up the low D on many occasions. An alto with an extended range should be able to reach this pitch, especially with the help of the descending sequence lending to this note.

Example 4.23 (*if everything happens that can’t be done*, bars 41 - 44)

Example 4.24 (*if everything happens that can't be done*, bars 98 – 100)



Harmonically, the cycle hints at several keys. A minor tends to be the strongest key throughout the song cycle, the music often returning to pass through this key in most of the songs. Starting and finishing in A minor, the majority of keys come from the sharp side of the circle of fifths (example 4.25)

Example 4.25 (table of main keys throughout song cycle)

Song	Keys implied
Nine birds(rising	A major, A minor
The little horse is newlY Born)	A and D major
Now, (more near ourselves than we)	C and A minor
If everything happens that can't be done	C minor, B major
Voices to voices	F sharp minor, E major, B major
One winter afternoon	A flat major
FINIS….Over silent waters	A minor

The tonality of the song cycle revolves mainly around the A major and minor keys, with links to their relative major and minors later on in the cycle. The A flat is first introduced during the central piece *if everything happens that can't be done*, which provides the hint for *One winter afternoon* which predominantly lies in the key of A

flat major. The final song resides in the key of A minor, which portrayed the theme of death during the plan set by *Nine birds(rising*.

The aim during this piece was to highlight the underlying themes of life, living, death and the aspect of beauty that lies within all of them, interpreting Cummings's texts to find the inner meaning of each of the poems. Through this interpretation the music represents the beauty of his words in many different ways, picking up on similar texts such as 'twiglight' found in *rising birds* and *over silent waters* and subjecting this to similar compositional methods, in this instance using high voice ranges combined with suspension figures. Text setting has also influenced the choice of dynamics, trying to imitate the stronger references with *fortissimo* expression markings.

The seven songs come together as a cycle to provide the image of the journey through life, from the new born of the foal to the final memories that we will remain conscious even after death, allowing the vocalists to demonstrate their vocal abilities. It is these aspects of beauty that this song cycle embraces, those moments that can be perceived so negatively, which really are a blessing. Cummings poems are all about putting aside the negative elements of what surrounds us and realising what still remains throughout everything, family, love, friendship, nature and visual beauty of the world we live in. All of these aspects are captured within *Seven Songs* portraying the ups and downs that occur through life and how we become stronger through each situation we face.

Dimensions

Composed for wind ensemble, *Dimensions* is a mixture of shapes and their areas, rotation, and momentum, the name reflecting the significance of shapes within the

piece. Shape rotation is the main generator of note production, while the calculated area of the shapes determines the duration of each section. The piece was going to be large in scale, both in duration and in the size of the instrumental group for which it was composed. The desired large wind ensemble provided the ability to create plenty of octave space between parts making use of the extended instruments of the family such as bass clarinet and piccolo, and to make a feature of their contrasting timbres.

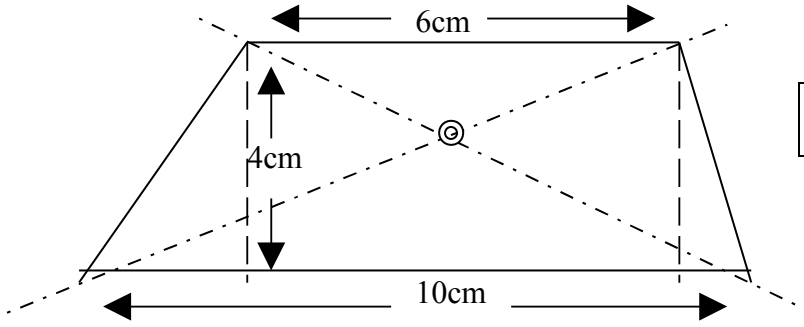
The function of Mauricio Kagel's pattern was an interesting generative process. Kagel's pattern is the use of a geometric shape that is placed on a form of grid or stave. From here a pivot point can be created on which the shape is rotated, flipped or mirrored. It is the corners of the shape that are used to determine which pitch is to be used, derived literally from the position in which the corners of the shape point on the stave. Evidence of four-way motifs can be found in *Staatstheater* (1971), which is an overall response to the whole ideal of opera rather than a specific interpretation of any aspect of the genre.[14] Often associated with the spirit of play, Kagel shows elements of a four-note motif that is transposed numerous times, but in this instance, the sequence is not rotated. The notes of the motif are very close together, often unlike that of Kagel's pattern using geometric shapes.

For *Dimensions* the main concern was that Kagel's pattern as a process had somehow been forgotten. Although music using this method must exist, its final portrayal does not show any obvious relation to the process, the method of composition being impossible to recognise. For this piece the main underlying feature would be the conscious use of Kagel's pattern as a generative process.

[14] Robert P. Morgan *Twentieth-Century Music* (New York: W. W. Norton & Company, Inc, 1991) p 451.

The first concern was in finding a shape that would create an interesting selection of possibilities. It was decided that any form of symmetry needed to be avoided and to prevent complexities, the number of sides should amount to no more than four. A conscious decision was made to use the shape's dimensions to depict the tonal journey and rhythmic values of the piece. Thus it was proposed that a trapezium should be used in the first instance, each side being a different length to create a wide range of possibilities for rhythmic value (example 5.1).

Example 5.1 (statistics of trapezium)

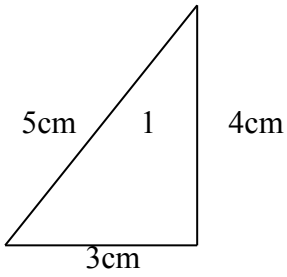


The structure was the next development from the trapezium, using the internal shapes and areas to depict section length and overall texture. First, the area of the trapezium was used to determine how long the piece would last; in this case the area totals $32cm^2$, therefore providing a structure of 32 minutes in length.

The shapes created by the vertical lines within the trapezium relate to the beginning, middle and end of the piece, the shape of each area again relating to the duration of each section (example 5.2).

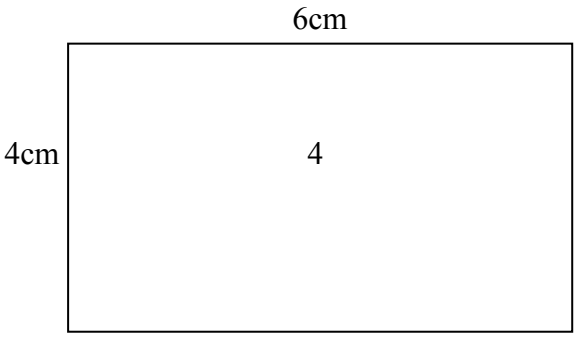
Example 5.2 (dimensions of inner sections)

Beginning (1)



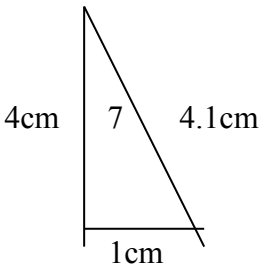
Area = 6cm^2

Middle (4)



Area = 24cm^2

End (7)

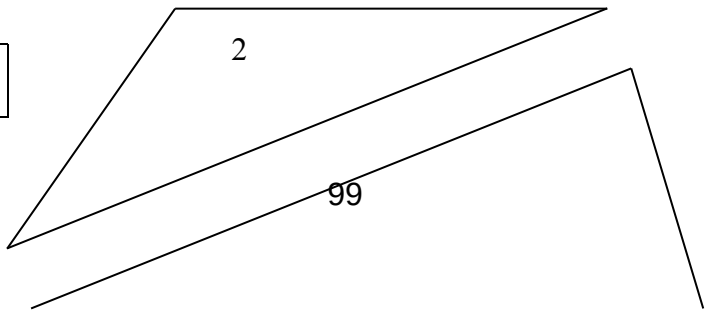


Area = 2cm^2

Four other triangles were taken from the trapezium, each one consisting of two sides from the outer edge of the four-sided shape (example 5.3).

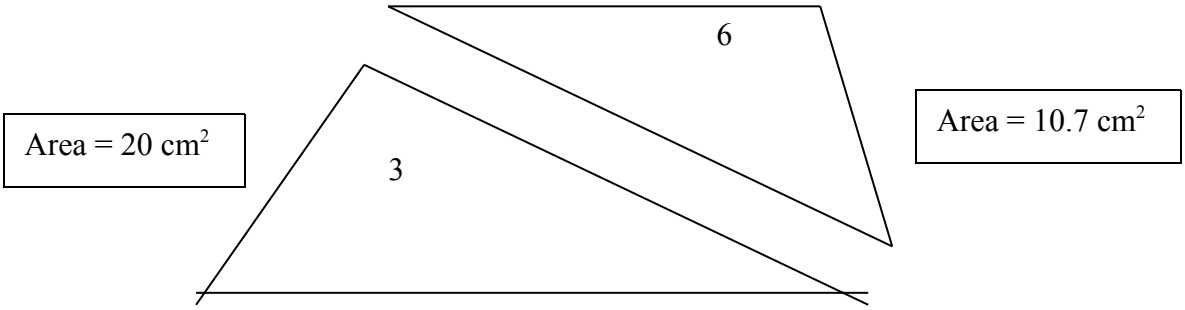
Example 5.3 (inner triangles)

Area = 14 cm^2



Area = 20 cm^2

5



These inner shapes of the trapezium were then used to determine the length of the joining sections (example 5.4): dividing the overall length of the piece in seconds by the total area of all sections combined, determined the duration that each centimetre unit would represent. The area of each corresponding shape was then multiplied by this result to establish the duration of each section (example 5.5). Each section has an internal structure within the overall arch form, letters corresponding to material within a section only (example 5.4).

Example 5.4 (table of structure)

Shape	Area	Length in Minutes	Bar number	Internal Structure
1	6 cm^2	1.59mins	1 –35	A B
2	14 cm^2	4.38mins	36 – 141	A B A
3	20 cm^2	6.37mins	142 – 270	A B A C A
4	24 cm^2	7.57mins	271 – 447	A B C
5	20 cm^2	6.37mins	448 – 585	A B A C
6	10.7 cm^2	3.33mins	586 – 661	A B A
7	2 cm^2	0.40mins	661 – 675	A

Example 5.5 (table of duration)

Section	Area of corresponding shape	Regulating calculation	Time calculated for section
1	6cm^2	119.2secs	1.59 minutes
2	14cm^2	278secs	4.38 minutes
3	20cm^2	397.2secs	6.37 minutes
4	24cm^2	476.6secs	7.57 minutes
5	20cm^2	397.2secs	6.37 minutes
6	10.7cm^2	212.5secs	3.33 minutes
7	2cm^2	39.7secs	0.40 minutes

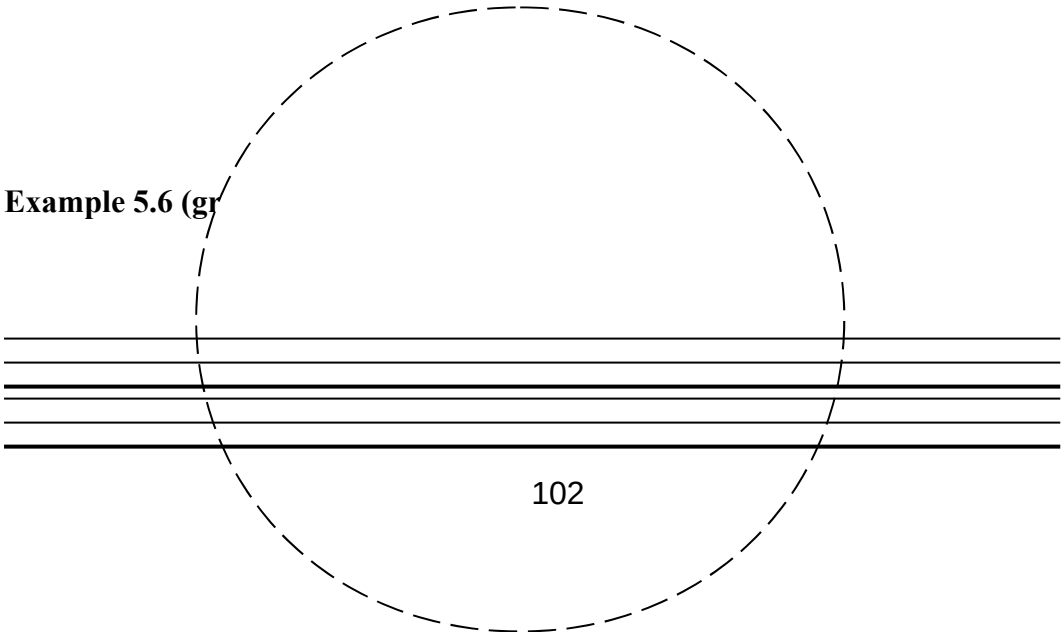
Total shape areas = 96.7cm^2

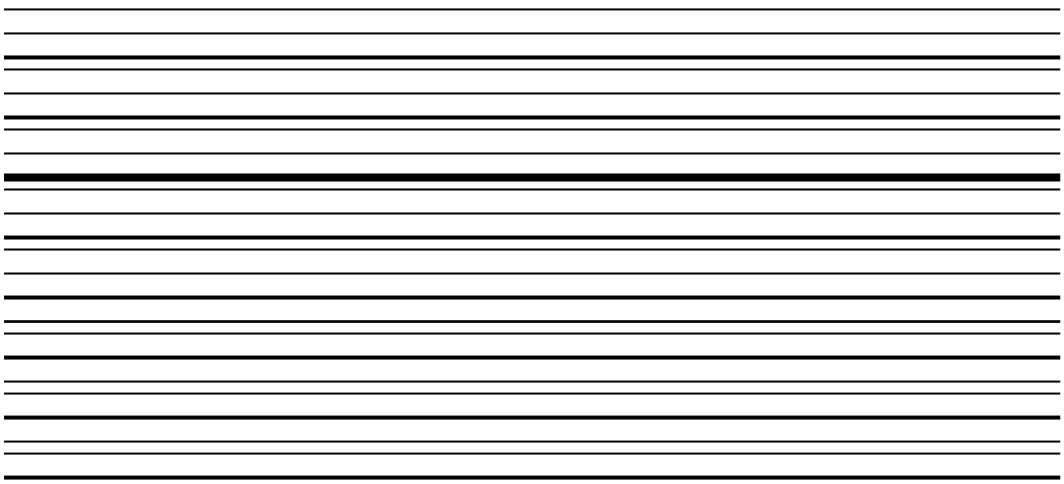
Altogether the piece is made up of seven sections which all correspond to the seven shapes that are taken from the trapezium. More shapes could have been used but to maintain structural coherence it was decided that the shapes chosen would have to have two of their sides taken from the walls of the trapezium, once divided by the imaginary lines at opposite corners (example 5.1). This form worked well with the C-section of the overall structure falling in line with the only rectangular shape formed

within the trapezium. Each area of the music is referred to as a section although the piece should be played as one complete movement. The change in music from one section to the other is the only indication the listener has of progression.

To provide the pitch material for the piece, the trapezium is rotated on a specifically designed grid enabling the possibility of sharp and flat notes, each point of the trapezium depicting a pitch on each rotation (Example 5.6). The grid is 15cm in height and the same in width. The centre line was the C above middle C during this process, although the relevance of register was abandoned once the composition was in progess. The pitches were then positioned at intervals of 7.5mm on the grid, with rotations that leave the points of the trapezium in-between these measurements depicted as either sharp or flat depending on which side of the note they fell. The grid was marked up with 10 degree increments in rotation, totalling eighteen positions overall.

Example 5.6 (gr





Tonally, the rotations emphasise certain pitches, the most common forming a chromatic cluster E natural, F natural and F sharp (example 5.7). However, when considering other strong pitches that occur during the many rotations of the trapezium, the opening favours the key of E major. The notes created from the use of Kagel's pattern are positioned in the order that they were produced, following serial compositional technique for the whole of the opening through both harmony and solo line. The opening section is the presentation of the music generated by Kagel's pattern.

Example 5.7 (table of pitches related to each rotation)

Rotation	Pitches
A	F natural, -E flat,- D flat, -E natural
B	B natural, E nature, B natural, D flat
C	E natural, F natural, A flat, B natural
D	G sharp, F sharp, F natural, B natural
E	B natural, F sharp, E flat, A natural
F	C sharp, F natural, D natural, D natural
G	C sharp, C sharp, D natural, F natural

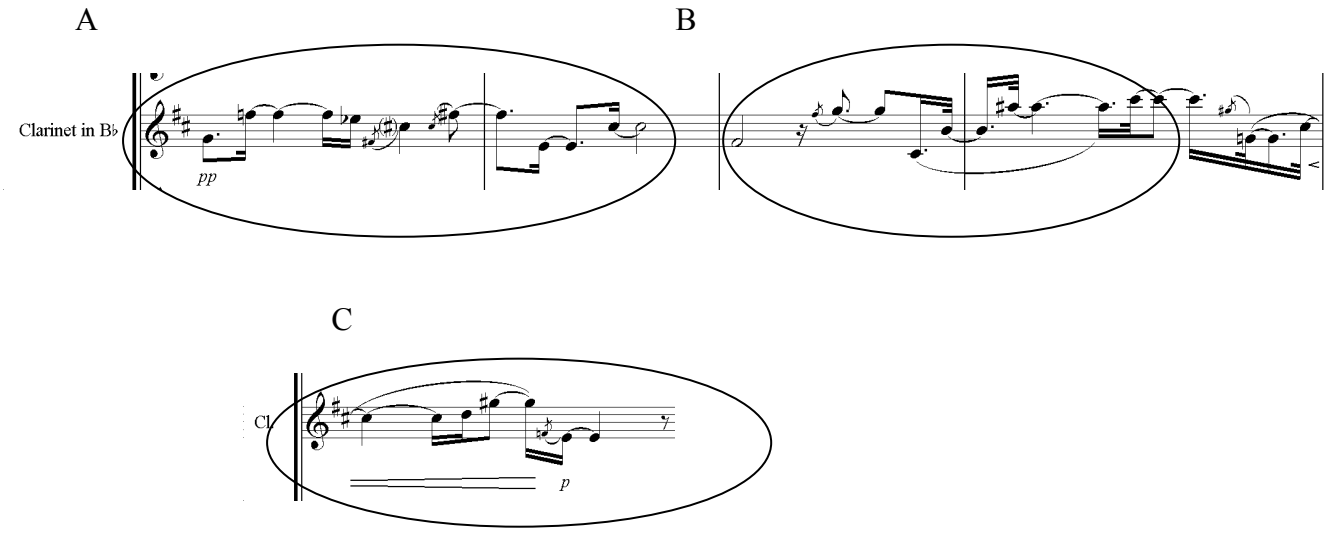
H	B natural, B natural, E flat, A natural
I	G natural, A natural, E natural, C sharp
J	E natural, F sharp, E sharp, F natural
K	B natural, E natural, B flat, G natural
L	F natural, E natural, C sharp, A sharp
M	D flat, E flat, E natural, A sharp
N	B flat, E natural, F natural, G sharp
O	A flat, F natural, F sharp, F sharp
P	A flat, F sharp, F sharp, E natural
Q	B flat, A sharp, F sharp, C sharp
R	D flat, C natural, E natural, A flat

The final procedure was a compositional development from Kagel's pattern, not originally used by himself. This final use of the rotations was to determine the rhythmic structure; where on each turn of the trapezium, the distance between each point would be measured. Rhythmic units were then created from these measurements, stating that 1cm would equal a semiquaver. If the measurement went over 10cm, then it would be classed as an acciaccatura so that the piece did not become static, and instead created a device for momentum. The first measurements to emerge from this system were: 3cm, 6cm, 1cm, and 10.5cm from rotation A (example 5.8).

Example 5.8 – (bars 1 - 3, showing opening motif)

In example 4.8 the first motif of the piece is played by the B flat Clarinet with the shape of the motif forming the most recognisable phrase of the composition. The second motif immediately follows in bar 3 (example 5.9) commencing with a similar pitch length following the rotation order. Although the semiquaver rest here seems to function in separating two motifs, mathematically it combines with the preceding minim F sharp to provide the completion of the second motif (example 5.9).

Example 5.9 – (bars 1 - 5 showing motifs A, B and C)



The first two motifs become the main elements that are presented throughout the whole of the composition, while the third motif, still important, is used less frequently. They are used melodically, harmonically, and texturally throughout the composition. Textural developments of these motifs are found mainly in the second, fourth and final sections. Bold harmonic statements of the first and second motifs are found in bars 58 – 103 (example 5.10), where the motifs are set in solid blocks,

followed by a more delicate melodic line that is set in thirds. This same technique is also used in the fourth section, combined with the use of some of the preceding material from the opening. The main motifs are used with an increased melodic and harmonic contribution than previous sections at this point.

Example 5.10 (bars 56 - 59)

The fourth section opens with a retrograde of the second motif in its original form (example 5.11). In bars 283 to 285 the first motif is retrograded and staggered at quaver intervals throughout the texture (example 5.12). The first motif then returns at the end of the A section in its original formation, written polyphonically throughout all instruments (example 5.13). All motifs during the fourth section are used as momentum generating devices.

Example 5.11 (bars 270 - 276)

Example 4.12 (bars 282 – 286)

Example 5.13 (bars 307 - 310)

The first motif also governs the content of the final section, ending with the same material that opened the piece. The motif is used in its original form, followed by its retrograde, used continually through the section (example 5.14). This progression is a rhythmic variation using semiquaver movement to thicken the texture as the piece draws to a close. Using the original plan, the seventh and final section was forty seconds in length and used to conclude the previous section as well as the whole piece. Forty seconds was not enough time to become the main concluding section that was needed, and for this reason the sixth section of the piece became the concluding material, with the seventh section providing the *codetta*.

Example 5.14 (bars 661 - 663)

Altogether this provides the final burst of momentum using an amalgamation of the main features of the piece.

Texture also follows structural shape to some extent. The first three sections are shaped texturally, and strictly follow the dimensions of the triangle from which the section is developed. For example, in the opening section of the piece, the texture follows the gradient of the first triangle (example 5.2). Increasing every thirteen

seconds, an instrument is added until nine instruments are participating, thickening in texture to represent the hypotenuse of the triangle. The end of this section uses all but one instrument, the cor anglais. This is the only instrument not to have been used at all in the first section, finding its role during the realisation of the second section, which quickly reduces to this instrument alone.

The third section follows the same idea of gradient progressions, but during the fourth, the elements of this procedure are broken down. Freedom in the fourth section was essential to allow the main developments of the piece to occur, enabling the third section to be the catalyst for this process.

The fourth and central section was the best place for the main developments to commence, being the largest section and pivotal point of the arch. Also the structure of shapes used for this arch form meant that the rectangle was the central element of the compositional scheme. This in turn meant that there were no visual gradients to follow like those provided by the triangular shapes and therefore no visual structure to suggest changes in texture or dynamic progression. This brought about the realisation that the perfect opportunity had arisen to create a break from the strict use of Kagel's pattern, abandoning the use of the shape gradients to determine textural development and dismissing completely the serial use of generated notes.

Textural devices are not only taken from the shapes that the trapezium has created, they also combine with rhythmic ideas to function as momentum-initiating features. In the opening section from bars 18 to 35, the earlier sustained pitches are later punctuated with semiquaver movement, increasing the momentum of the piece (example 5.15). In many instances these semiquavers are used as a hocket figure

interlocking pitches throughout the instrumentation (example 5.16). The hocket device is then featured and developed through the rest of the composition.

Example 5.15 (bars 102 - 104)

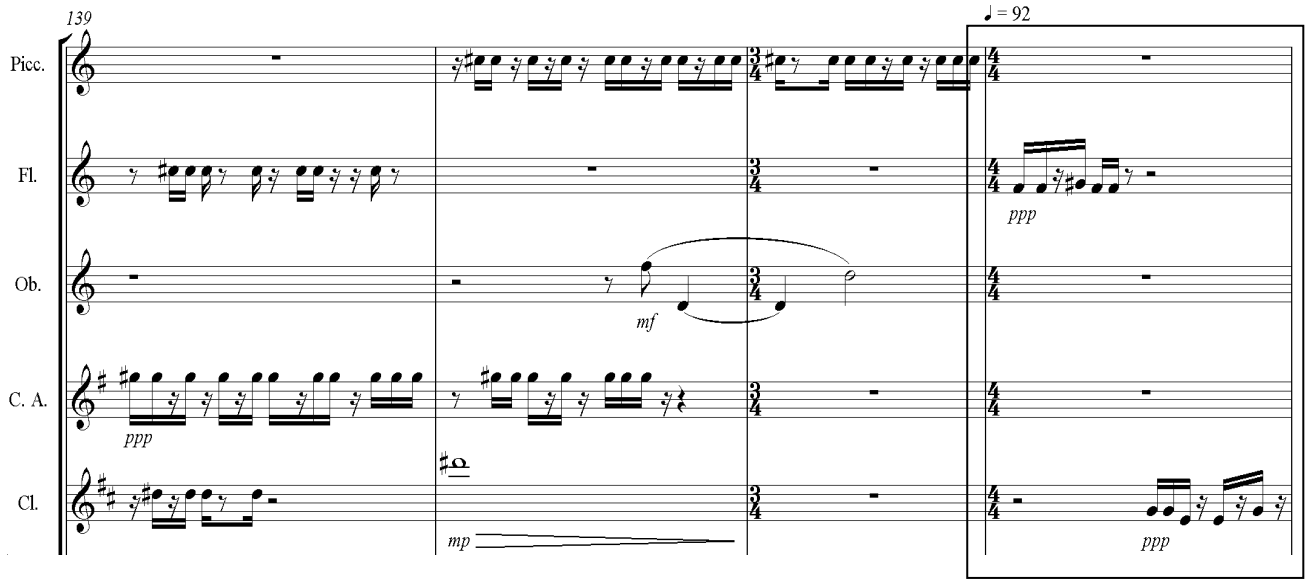
Example 5.16 (bars 25 - 28)

This rhythmic device occurs at many instances within the piece, initially to increase momentum, but later used from bar 118 as part of a theme in its own right (example 5.17).

Example 5.17 (bars 220 - 223)

The first segment of the third section commences in bar 142 introducing the semiquaver figures as an element on its own. Featuring in the majority of the section, it is made up of small semiquaver fragments that contain the pitches as stated from the first use of Kagel's pattern. It is at this instance that the rotations are taken out of their original order, and split from their groupings of four, developing the usage for Kagel's pattern. The start of this section takes just two alternating notes that incur increments in pitch content and dynamics as the texture thickens (example 5.18).

Example 5.18 (bars 139 - 142)



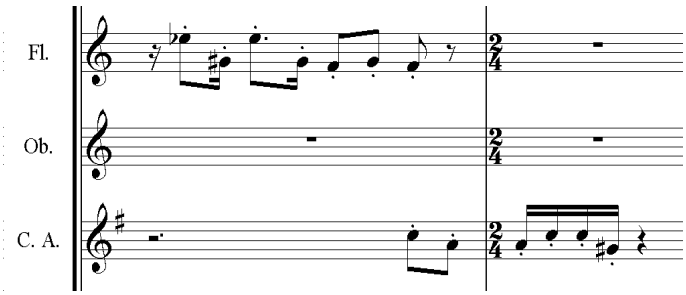
The form used for the third section between bars 142 to 217 is a rondo A B A C A, and although each A section that occurs is based on this new semiquaver feature each one is unique in its own way. The second A section in bars 195 to 217 sees a strong

decrease in rhythmic momentum. This works by combining a regularly decreasing tempo throughout the first half of the section with notation that increases in duration through the use of straight quavers, triplet quavers and semiquavers (example 5.19).

Example 5.19 (bars 203 - 206)

Once the centre of this section is reached at bar 205, the momentum increases once again with the semiquaver fragments quickly returning. The succession of changing rhythmic units, alternating between duplets and triplets, combined with the changing tempo and *accelerando* at the end of the sections dramatically alters the flow of the music once again. The last statement of the A material is a complete retrograde of the first A section, set at a new tempo of 118 crotchet beats per minute. At this speed, the retrograde is hard to recognise until the final three bars of the section, bars 268 to 270 where the melodic fragments are presented again by solo instruments (example 5.20).

Example 5.20 (bars 268 - 270)

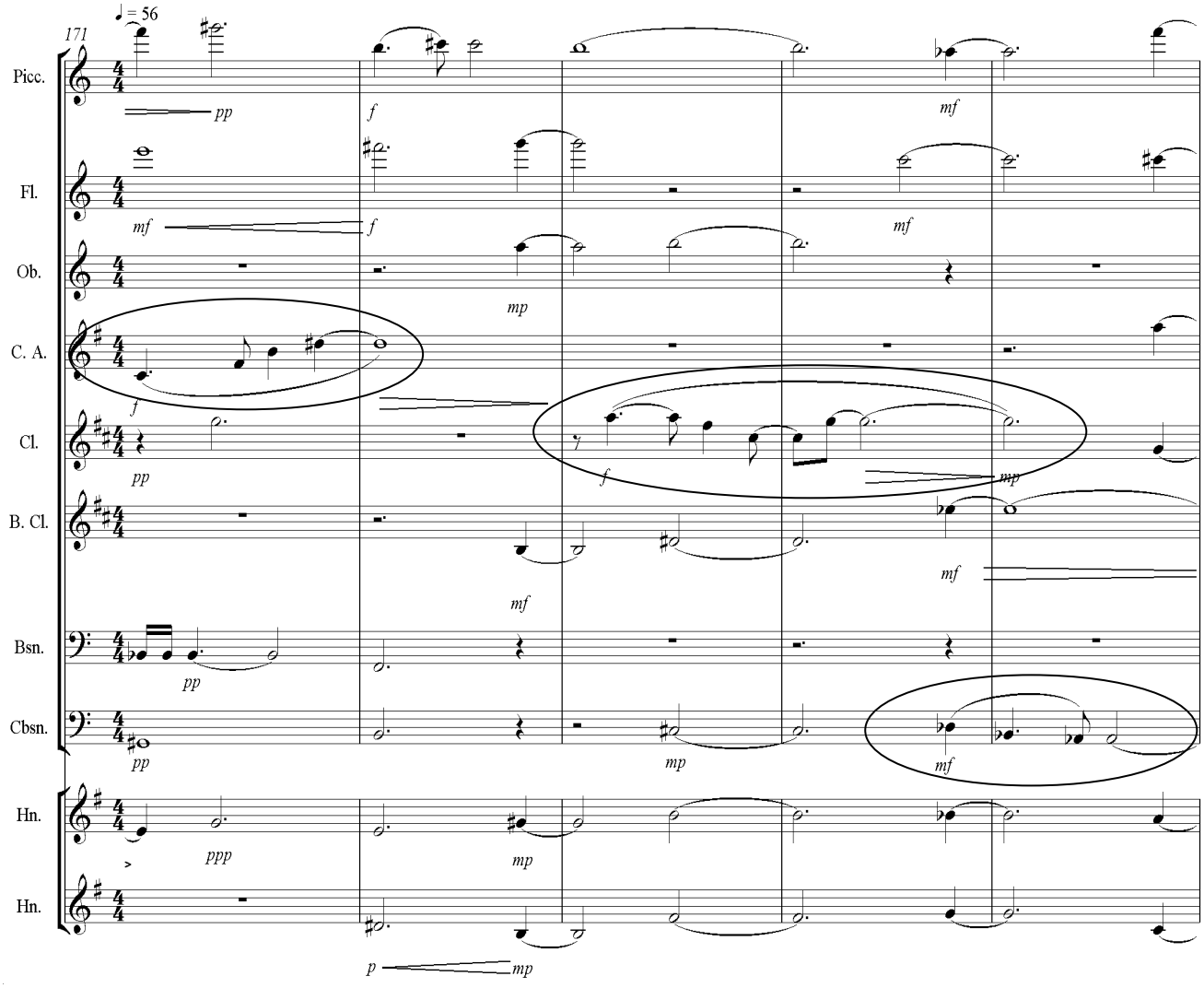


The structuring of the momentum was one of the main devices used throughout the work to emphasise new sections and returning material. Specific sections within the piece would need to be at a slower setting of tempo, with the first significant reduction in momentum set between the first two semiquaver elements of the third section in bars 171 to 194. Here, the more static movement set a tempo of 56 crotchet beats per minute, extended to create a chordal structure to accompany just one solo melody line. The pitches are selected in rotation groups, although in no particular order, stating the process again once all the rotations had been used. These are then set so that notes in close proximity to each other are distributed throughout the instrumentation, creating distance between these pitches, sometimes as much as five octaves apart.

The chordal representation of the rotations allows the listener to hear how a technically derived set of pitches can be relayed pleasantly to the ear. This takes the material and manipulates its spacing to create a sense of calm after building the momentum of the semiquaver material before it. While the majority of instruments are playing this chordal passage, each instrument at some point gets a segment of

melodic line. This is again generated from the rotations, each instrument playing one whole rotation before the line transfers to another timbre (example 5.21)

Example 5.21 (bars 171 - 175)

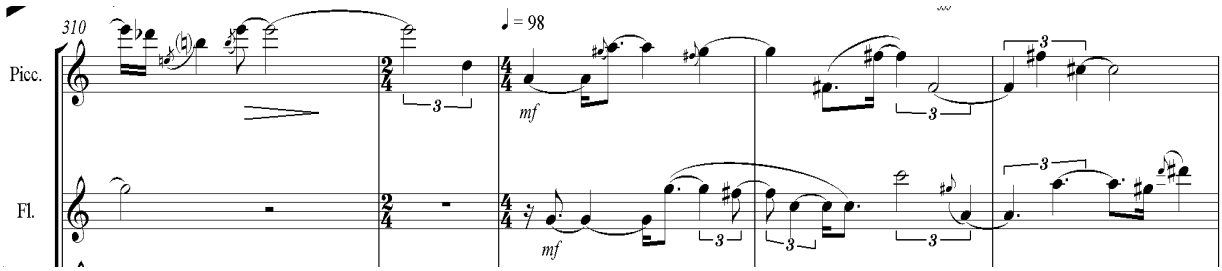


Melody also has a major role throughout *Dimensions*, initiated by the strong melodic fragments of motif at the beginning of the piece. As motif use progresses through the work, each one is manipulated with the addition of pitches and varying rhythmic values. In the fourth section the rhythmic values are shortened, and then new pitches are added in between to make the final version of the melodic line equal to the same length of its original. These new pitches are free from the system of Kagel's pattern

allowing the melody to develop from the initial representation of the pitches without following any specific order.

In bar 312, the first motif returns as the subject material, manipulated to create a melodic line within a fugal device. For this fugato the subject is between two parts, opening with the piccolo and flute, splitting the melodic line between them. This works so each alternate note is placed with the other instrument. While the next pitch is played the previous one is lengthened so that both pitches sound together at crossover points (example 5.22). The same idea is applied to the second motif, again splitting the line between two instruments to create the counter subject (example 5.23).

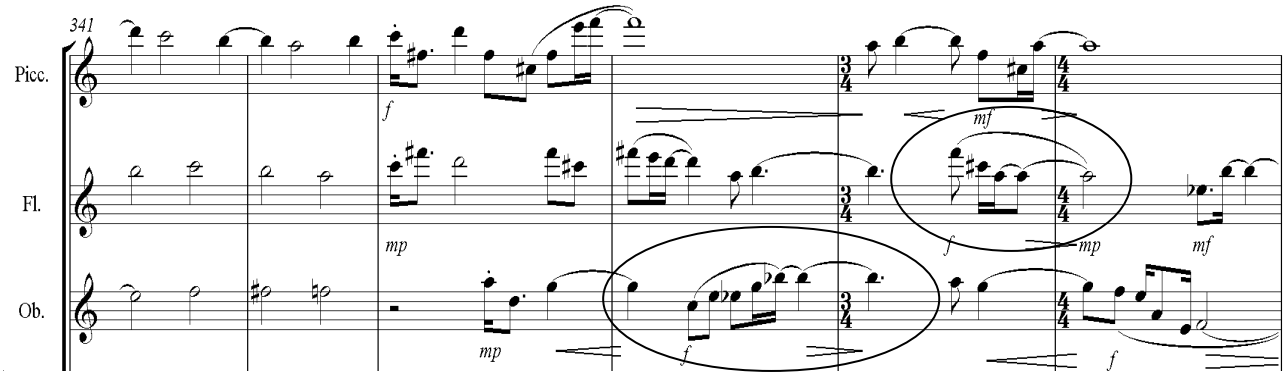
Example 5.22 (bars 310 - 314)



Example 5.23 (bars 315 - 317)

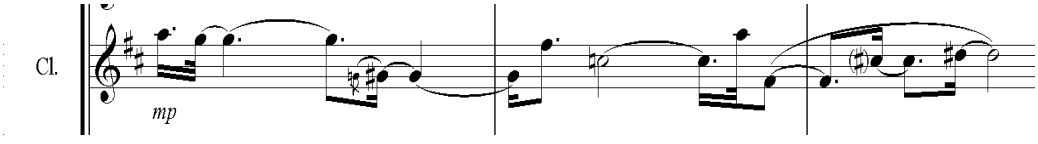
The *fugato* is the catalyst for this part of the piece, but it is not used in the conventional way. As already stated, the subject and counter subject are split between two parts each equalling three bars in length. There are still the usual episodes that are expected in fugal works, each represented by four bars of music, which increase as the section progresses. In bar 338, the episode totals to five bars, which help the audience, perceive a sense of change. This change comes as the subject and counter subject come back, splitting the original melodic line, in the same way, but this time between three instruments. The melodic line then favours certain parts of the subject and counter subject and these are then fused with an increase in dynamic to emphasize these points (example 5.24). The last appearance of the subject and counter subject is at bar 380; the subject and counter subject are each supplied by half the ensemble (five instruments). The top half of the ensemble with higher registers play the subject, while the lower half, mainly accustomed to playing in their lower register take the counter subject, creating a spatial difference of four octaves.

Example 5.24 (bars 341 - 346)

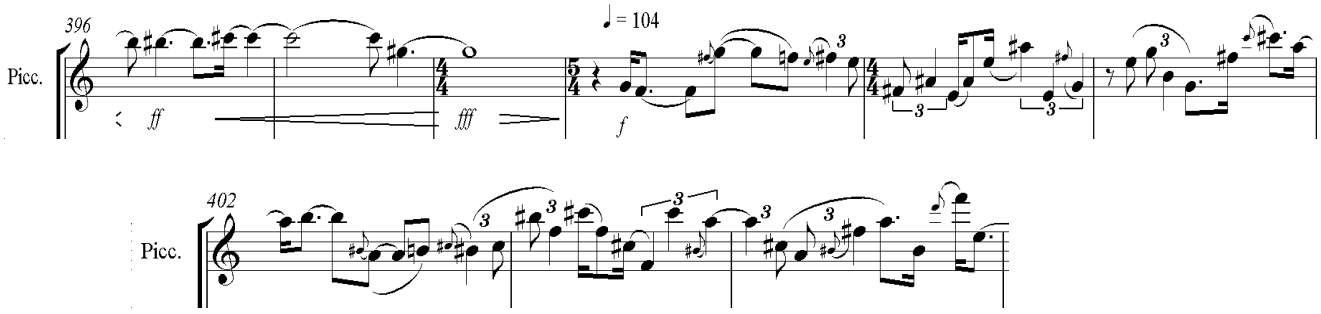


Rhythmic manipulations of the opening motifs are used from section four until the end of the piece following directly from the *fugato* section. Motivic variation is achieved by exploiting instrumental timbre. For example the piccolo is chosen as the solo instrument exploring its lower register at bar 399 using the opening material from bars 9 to 11 (example 5.25). This motif is then given its major role in the piece, manipulated to create a passacaglia by adding pitches and rhythms to increase the expanse of the melodic line, that is then passed on through the instrumentation, later retrograding the line (example 5.26). All instruments use this new melodic line, reverting to the repetitive semiquaver figure after the performance of the melody has been completed. The melody is built up in texture and played homophonically, using the same pitch as the other occurrences of the line. At bar 423, a new accompaniment type is added; sustained pitches with increasing then decreasing dynamic levels. The melody line is then transposed throughout parts, creating a new sense of tension as this section draws to an end.

Example 5.25 (bars 9 - 11)



Example 5.26 (bars 399 - 404)



The different instrumental timbres are as equally important as momentum in terms of sustaining interest throughout the piece. The ensemble is made up of some of the lesser-used wind instruments, which aims to expand the available sonorities. The opening of a section often uses the extreme areas of an instrument's range, such as the low piccolo or high bass clarinet, as well as parts of the piece that make a feature of the solo line (example 5.27). This use of extended ranges often occurs when an instrument has a solo line, or while any accompanying instrumentation is set at a very small dynamic

Mechanical devices form the basis of this piece, which provided inspiration during the compositional process, and for 32 minutes of composition, ideas were in abundance. The whole process of leaving the tonal centres to develop in their own right around an undetermined pitch-generating process created many significant moments within the piece. Finding ways to manipulate the sound created in its first instance was the most challenging and rewarding experience throughout the composition of this work.

Appendix

Song 1: ***Nine birds (rising***

nine birds (rising

through a gold moment)climb:
ing I

-nto
wintry
twi-

light
(all together a
manying
one

-ness)nine
souls
only alive with a single mys-

tery(liftingly
caught upton falling)silent!

Ly living the dying of glory

Song 2: ***The little horse is newly born***

The little horse is newly

Born)he knows nothing,and feels
everything;all around whom is

perfectly a strange
ness(of sun
light and of fragrance and of

Singing)is ev
erywhere(a welcome
ing dream:is amaizing)
a world.and in

this world lies:smoothbeautifuL
ly folded;a(brea
thing and a gro

Wing)silence,who;
is:some

oNe.

Song 3: ***Now(more near ourselves than we***

Now(more near ourselves than we)
is a bird singing in a tree,
who never sings the same thing twice
and still that singing's always his

eyes can feel but ears may see
there never lived a gayer he;
if earth and sky should break in two
he'd make them one(his songs so true)

who sings for us for you for me
for each leaf newer than can be:
and for his own(his love)his dear
he sings till everywhere is here

Song 4*: If Everything happens that can't be done*

If everything happens that can't be done
(and anything's righter
than books
could plan)
the stupidest teacher will almost guess
(with a run
skip

around we go yes)
there’s nothing as something as one

One hasn’t a why or because or although
(and books know better
than books
don’t grow)
one’s anything old being everything new
(with a what
which
around we come who)
one’s everyanything so

so world is a leaf so tree is a bough
(and birds sing sweeter
than books
tell how)
so here is away and so your is a my
(with a down
up
around again fly)
forever was never till now

now I love you and you love me
(and books are shutter
than books
can be)
and deep in the high that does nothing but fall
(with a shout
each
around we go all)
there’s somebody calling who’s we

we’re anything brighter than even the sun
(we’re everything greater
than books
might mean)
we’re everyanything more than believe
(with a spin
leap
alive we’re alive)
we’re wonderful one times one

Song 5: ***Voices to voices, lip to lip***

voices to voices,lip to lip
I swear(to noone everyone)constitutes
undying;or whatever this and that petal confutes…
to exist being a peculiar form of sleep

what’s beyond logic happens beneath will;
nor can these moments be translated:I say

that even after April
by God there is no excuse for May

--bring forth your flowers and machinery:sculpture and prose
flowers guess and miss
machinery is the more accurate,yes
it delivers the goods,Heaven knows

(yet are we mindful, though not as yet awake,
of ourselves which shout and cling,being
for a little while and which easily break
in spite of the best overseeing)

I mean that the blond absence of any program
Except last and always and first to live
Makes unimportant what i and you believe;
not for philosophy does this rose give a damn…

bring on your fireworks,which are a mixed
splendor of piston and of pistil;very well
provided an instant may be fixed
so that it will not rub,like any other pastel.

(While you and i have lips and voices which
are for kissing and to sing with
who cares if some oneeyed son of a bitch
invents an instrument to measure Spring with?

each dream nascitur,is not made…)
why then to Hell with that:the other;this,
since the thing perhaps is
to eat flowers and not to be afraid.

Song 6: ***One winter afternoon***

One winter afternoon

(at the magical hour
when is becomes if)

a bespangled clown
standing on eighth street
handed me a flower

Nobody,it's safe
to say,observed him but

myself,and why?because

without any doubt he was
whatever(first and last)

mostpeople fear most:
a mystery for which I've
no word except alive

- that is,completely alert
and miraculously whole;

with not merely a mind and a heart

but unquestionably a soul –
by no means funereally hilarious

(or otherwise democratic)
but essentially poetic
or ethereally serious:

a fine not a coarse clown
(no mob,but a person)

and while never saying a word

who was anything but dumb;
since the silence of him

self sang like a bird.
Mostpeople have been heard
Screaming for international

Measures that render hell rational
- i thank heaven somebody's crazy

enough to give me a daisy
Song 7: *Finis*

Over silent waters
Day descending
Night ascending
Floods the gentle glory of the sunset
In a golden greeting
Splendidly to westward
As pale twilight

trem-
bles
into
Darkness
Comes the last light's gracious exhortation
Lifting up to peace
so when life shall falter
standing on the shores of the
eternal
god
May I behold my sunset
Flooding
Over silent waters

Bibliography

Brand, Julinane and Christopher Hailey, *Constructive dissonance: Arnold Schoenberg and the transformations of twentieth-century culture* (London: University of California Press, 1997).

Brindle, Reginald Smith, *Musical Composition* (London: Oxford University Press, 2002).

Brindle, Reginald Smith, *Contemporary Percussion* (London: Oxford University Press, 1991).

Brindle, Reginald Smith, *Serial Composition* (London: Oxford University Press, 1966).

Brindle, Reginald Smith, *The New Music: the avant-garde since 1945* (London: Oxford University Press, 1987).

Cole, Hugo, *Sounds and Signs: aspects of musical notation* (London: Oxford University Press, 1974).

Cummings, E.E., (ed. George.J.Firmage): *Complete Poems 1904-1962* (New York: Liveright Publishing Company, 1994).

Forte, Allen, *The Structure of Atonal Music* (London: New Haven, 1973).

Friedman, Norman, *e.e.cummings: the art of his poetry* (Baltimore, 1960).

Gerhard, Roberto, (ed. Meirion Bowen): *Gerhard on Music: Selected Writings* (Aldershot: Ashgate, 2000).

Grant, M.J, (ed Arnold Whittall) *Serial Music, Serial Aesthetics* (Cambridge: Cambridge University Press, 2005).

Häusler, Josef, 'Mauricio Kagel' in Stanley Sadie (ed.), *The New Grove Dictionary of Music and Musicians* (London: Macmillian, 1980).

Ivashkin, Alexander, *Alfred Schnittke* (London: Phaidon Press Limited, 1996).

Johnson, Robert Sherlaw, *Messian* (London: Oxford University Press, 1989).

Karolyi, Otto, *Introducing Modern Music* (Harmondsworth: Penguin 1995).

Karolyi, Otto, *Modern American Music* (London: Cygnus Arts, 1996).

Lester, Joel, *Analytic approaches to twentieth century music* (London: W.W.Norton, 1989).

Macdonald, Malcolm, *Varèse, Astronomer in Sound* (London: Khan & Averill 2006).

Matossian, Nouritza, *Iannis Xenakis. English* (London: Kahn & Averill, 1986).

Morgan, Robert. P, *Twentieth-Century Music* (London: W.W.Norton, 1991).

Nyman, Michael, *Experimental Music Cage and Beyond* (Cambridge: Cambridge University Press, 1999).

Piston, Walter, *Orchestration* (New York: W.W.Norton, 1955).

Pople, Anthony, *The Cambridge Companion to Berg* (Cambridge: Cambridge University Press, 1997).

Pritchett, James, (ed. Arnold Whittall) *The Music of John Cage* (Cambridge: Cambridge University Press, 1996).

Rahn, John, *Basic Atonal Theory* (London: Longman, 1980).

Rich, Alan, *American Pioneers* (London: Phaidon Press Limited, 1995).

Rockwell, John, *All American music : composition in the late twentieth century* (London: Khan & Averill, 1985).

Schoenberg, Arnold, (ed. Gerald Strang): *Fundamentals of Music Composition* (London: Faber, 1970).

Stravinsky, Igor and Robert Craft, *Conversations with Igor Stravinsky* (London: Faber, 1979).

Tusa, John, *http://www.bbc.co.uk/radio3/johntusainterview/ligeti_transcript.shtml*.

Toop, Richard, *Gyorgy Ligeti* (London: Phaidon Press Limited, 1999).

Varga, Bálint András, *Conversations with Iannis Xenakis* (London: Faber, 1996).

Webern, Anton, (ed.Willi Reich): *The Path to New Music* (Pennsylvania: Theodore Presser, in association with Universal Edition, 1963).

Whittall, Arnold, *Musical Composition in the Twentieth Century* (Oxford: Oxford University Press, 1999).

Xenakis, Iannis, *Formalized Music* (New York: Pendragon Press, 1992).